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ABSTRACT

Four major components comprised the Organizational Development Research Project at Indiana Vocational Technical College (Ivy Tech). The major component of the research was an evaluation of a model of cost effectiveness/benefit analysis previously developed for postsecondary vocational educators in Indiana. Cost data for all Region 8 Ivy Tech programs were identified from 1981 and 1982 budgets, and costs were calculated to identify cost stability and change by program for the two years. This cost analysis component was augmented by enrollment data, credit hour production, and number of graduates. A composite information profile was, thereby, developed to be used in setting future program goals and objectives along with institutional goals. Next, characteristics of Ivy Tech graduates for the last two years were identified through a mailed survey along with the graduates' perceptions of program strengths, concerns, and needs. Another component of the organizational study identified nonreturning student characteristics and their perceptions of program effectiveness. These two surveys found that graduates were much more likely to be employed and to earn higher wages than students who did not return. Similar strengths and weaknesses of the programs were identified by both groups. The final component of analysis was a survey of employer supervisors of graduates in 1981 and 1982 who were identified from the returned survey forms sent to graduates. Employers were asked to identify the strengths, concerns, and weaknesses they perceived in program offerings and select services at Ivy Tech. The general conclusion from the data was that supervisors of graduates lacked information about Ivy Tech but that they viewed the graduates positively and would recommend employment of future graduates of Ivy Tech. The results of these four parts of the study will be used to plan better vocational-technical education for residents of central Indiana. (KC)

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INDIANA VOCATIONAL TECHNICAL COLLEGE: REGION 8

ORGANIZATIONAL DEVELOPMENT RESEARCH

A Multiplex Opportunities for

Vocational Education Report

Ronald B. Britton Ed.D

Indiana University

December 1982

CE 037 771

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Indiana Vocational Technical College

Region 8

Organizational Development Research

M.O.V.E. Report

RONALD BRITTON

1982

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Outline of the Organizational Development Research

A Multiplex Opportunities for Vocational Education (MOVE) Project

Indiana Vocational Technical College: Region 8

Four different components comprise the Organizational Development Research Project at Ivy Tech. The major component of the research pertained to cost analysis evaluation . This research was to critique a model of cost-effectiveness/benefit analysis previously developed for post-secondary vocational education in Indiana. The cost data for all Region 8 Ivy Tech programs was identified from budget reports for 1981 and 1982. Costs per F.T.E. by program were calculated to identify cost stability and change by program for the two years. This cost analysis component was augmented by enrollment data, credit hour production, and number of graduates. A composite information base was developed to be used in setting future program goals and objectives, along with institutional goals.

Next, characteristics of Ivy Tech graduates for the last two years were identified by surveying the population of graduates from Summer quarter 1981 through Spring 1982. Perceptions of program effectiveness were obtained by the identification of program strengths, concerns, and needs.

Another component of the organizational study identified

nonreturning student characteristics and their perceptions of program effectiveness. A survey questionnaire was sent to a stratified random sample of approximately 1000 former Ivy Tech students. The survey instrument requested additional information about "why" the student left Ivy Tech.

The final component of analysis is a survey of employer supervisors of graduates in 1981 and 1982. The employers were identified from the returned survey instruments sent to graduates. Employers were asked to identify the strengths, concerns, and weaknesses they perceived in program offerings and select services at Ivy Tech.

Cost-effectiveness and cost-benefit techniques are powerful tools which can provide planners with information for development purposes. Program and organizational development coming from information in these studies helps to improve the return of investment made by students, employers, and society. Identifying the return on investment should initially be through cost-effectiveness rather than cost-benefit analysis. Assigning pecuniary values to different benefit dimensions is a difficult and controversial procedure in cost analysis. Cost-effectiveness evaluation provides a framework for more immediate utility.

The research is combined into the perspective of Organizational Development assessment because the information obtained can be viewed from a new gestalt perspective. The continuing analysis of data is best served by looking for interrelationships between

the components as well as discrete information by one group. Using both frames of reference the research can assist in the Ivy Tech - Region 8 planning efforts to provide better vocational-technical education for residents of Central Indiana.

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INDIANA VOCATIONAL TECHNICAL COLLEGE: REGION 8

ORGANIZATIONAL DEVELOPMENT RESEARCH

COST ANALYSIS EVALUATION

Cost-Effectiveness/Benefit Analysis

A Multiplex Opportunities for
Vocational Education Report

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December 1982

Cost Analysis Evaluation

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COST-EFFECTIVENESS/BENEFIT ANALYSIS

Cost-Effectiveness/Benefit Analysis Objective

The Multiplex Opportunity for Vocational Education (MOVE) project provided for "the research development of a report demonstrating the cost-effectiveness-benefit analysis of postsecondary vocational programs with Indiana Vocational Technical College-Region 8 area business and industry". The primary procedure was to review and test the model, Cost-Effectiveness/Benefit Analysis of Postsecondary Vocational Programs developed under a Indiana State Board of Vocational Technical Education grant by Jin Eun Kim in 1977. Supporting objectives were, a. to develop and or test other cost-effectiveness models as appropriate, and b. create a report demonstrating cost-effectiveness/benefit analysis of postsecondary vocational programs with Region 8 area business and industry.

Expansion of the MOVE Objective

Prior to testing Kim's model in Region 8, it was necessary to expand the monetary and nonmonetary data base. The expanded scope of the MOVE grant objective then was to develop an integrated format of program costs. The additional scope of program cost review and program characteristics resulted in development of cost-effectiveness information system. This cost-effectiveness analysis information system provides a two year program database that is reliable and meaningful for program

goal and objective formulation. The database also enables cost-effectiveness evaluation within program areas and between programs. Extensive surveys were conducted to identify characteristics of graduates and nonreturning students for the last two years. Additional data was obtained from supervisors of graduates concerning the work performance of the graduate. Program evaluation data was also obtained from the graduates, nonreturners, and supervisors. Analysis of the three survey research reports are included in other sections of the Organizational Development Research Report.

The cost analysis of data provide necessary information for development of program goals and objectives, as well as institutional planning, that was not previously available. The feedback data will be for organizational development, with the cost analysis evaluation a major component. Other procedures such as marketing, staff-development, course development may be institutional functions which benefit in the development process.

Cost-effectiveness and Cost-benefits

In this report the term "cost analysis" is used when generalizing the practice of using cost data in program evaluation. Two cost evaluation concepts centered in this study are cost-effectiveness analysis and cost-benefit analysis. Other cost analytic procedures are less common and will not be the focus of this study. To provide the distinction between cost-effectiveness and cost-benefits, Thompson (1980) states that, "cost-effectiveness

is primarily a tool of formative evaluation-determining the best way to achieve a program objective. Benefit-cost analysis, on the other hand, is seen as largely summative-determining whether or not a program is justified" (p226).

Overview of the Kim Model

Kim (1977b) organized the cost-effectiveness/benefit analysis model under three procedures. These procedures and the steps innvolved were;

1. Planning a cost-effectiveness/benefit study.
   a. Determine the purposes of a cost-effectiveness/benefit study.
   b. Identify available resources for the study.
   c. Develop a study plan
2. Implementing a cost-effectivenes/benefit study.
   a. Determine target goals
   b. Assess program outputs
   c. Analyze program costs
   d. Compute cost-effectiveness/benefit measures
3. Utilizing the results from the study.
   a. Interpret the measures
   b. Utilize the results for program evaluation, development, and planning

The cost-effectiveness/benefit model developed by Kim was released in two reports; a Technical Report, and a Administrators

Manual. Later, a Practicum Manual was developed by Bainter and others (Kim being one) as a case study at a hypothetical institution. The Practicum Manual was disseminated by the National Center for Research in Vocational Education.
The Kim model was promoted as a system for evaluating vocational programs at the post-secondary level. This evaluation included procedures for planning the evaluation and the analytical framework for conducting the evaluations. The evaluation results in an integrated cost-effectiveness/benefit analysis .

Analysis of the Kim Model

The application of the Kim model requires collaborative goal setting, measurable objectives, and cost data for the programs being evaluated. Kim (1977a.) states, "Determination of program objectives and output requires data on enrollment in and completion of the vocational instructional program, on career preparation, and on follow-up information pertaining to job placement, advanced studies after graduation, and long-term achievements" (p.29).

Kim (1978a) reserved a suggestion for the post-study procedure of "interpretation of the measures" that should instead be in the "planning" phase. He stated, "deliberate effort should be made to check whether program objectives were appropriately selected, target goals were adequately determined, and what effectiveness index is most reliable to judge program effectiveness" (p.34).

A cost-effectiveness format proposed by Kim the following year still promoted the importance of establishing objectives and setting goals. Pershing (1978) recommended cost analysis must first be concerned with clarifying the goals and objectives before the efficiency of vocational education can be increased. This application of the general systems approach defines elements of the system as imputs, outputs, and processors. If an institution has not developed measurable objectives, and if accounting costs and program characteristics are not available for individual programs, the application of cost-effectiveness or cost-benefit analyis evaluation is premature.

Advisory Committee Recommendation

One of the unique features of the original Kim model was that it provided a method to evaluate different vocational programs through identifying a combined cost/benefit procedure. Kim's project advisory committee agreed with many of the conceptual assumptions of the Kim model but did not support the single cost effectiveness/benefit factor procedure. The cost-benefit measures should be separate from the cost-effectiveness measures for practical use. Cost-benefit technique might be difficult for practitioners to apply by themselves. Review of more recent cost analysis literature does not support the conceptual framework of a "integrated model" of cost effectiveness/benefit analysis. Measurement techniques have not evolved enough to support an integrated cost-effective/cost-benefit model. Kim did modify his model in the Practicum Manual and treat

cost-effectiveness and cost-benefit analysis as two distinct parts.

Strength of the Kim Model

One of the strengths of the Kim model is the step-by-step outline in the Administrator's Manual. This outline shows how to complete the cost-effectiveness and cost- benefit analysis from beginning to end. The Practicum Manual provides a simulated exercise to understand the procedure and anticipate some of the questions which could arise in using the model. The manual included all the formulas needed to calculate the costs and the ratios, and what is to be included as costs (according to Kims' perspective). While the outline and practicum exercise are informative, they project an over-simplification of the process of cost-effectiveness and cost-benefit analysis. The Kim model is more appropriate when the cost-effectiveness and cost-benefit aspects are dichotomized and used as an information source rather than a vehicle for program decision making. The basic assumption of cost-benefit is that benefits and costs are expressed in monetary values. This is not true of cost-effectiveness. If Kim's model is used, the guidelines in the Practicum Manual should be followed rather than the Administrator's Manual.

Expertise Needs in Cost Analysis

Levin (1981), addresses the complexity involved in cost analysis

studies by suggesting, "The evaluation analyst who requires assistance to develop CB (cost-benefit) or CE (cost-effectiveness) evaluation optimally should select a recognized expert who has conducted these types of evaluations...there are relatively few such experts" (p.133). The investment in time, energy, and funding has been a deterrent to conducting cost-effectiveness/benefit analysis evaluation. The different models appearing in the literature places an administrator at a disadvantage in deciding what system is valid, and practical. An example of this methodological confusion exists between Kim and other evaluators.

A methodological discrepancy between the Kim and the Levin models centers on the principle of assigning weight values to different objectives. For example, a group conducting a cost-effectiveness study may assign more importance to the recruiting of minorities and assign a weight value twice that of the objective to reduce minority attrition (the rationale for which is not beyond reason if the attrition rate is unknown). Consequently, the problem of minority attrition would be compounded while the program demonstrated effectiveness. The individual objective (objective-recruiting minorities) cannot discount the importance of the over-all mission (goal-graduating minorities).

What is missing in the Kim model (and other models) is an effective procedure to identify appropriate program goals and objectives which mesh with the institution mission. It is suspected that many institutions simply have not been able to

formulate the up-front measurable objectives and goals needed as prerequisites for cost-effectiveness/benefit analysis. The Practicum Manual does provide a structure by suggesting the cost analyst start with information from the previous year. The sample objectives in the Kim model also do not address the complexity of appropriate goal and objective development and provides no rationale for weight assignment to objectives. The cost analysis system proposed by Levin avoids this short-coming by using a cost analysis procedure called "cost-utility". The explicit assumption is stated that the procedure injects much more subjectivity than is found in cost-effectiveness and cost-benefit analysis. This subjectivity recognition is not evident in the Kim model, even though subjectivity is present.

The Project Advisory Committee on the Kim Model refined the program objective and target goal statements into a simpler form for practitioner use. The refinement for practitioner use may be appropriate for implementing part of the model, but because some of the elements are specialities the practitioner would be overwhelmed. Some elements of cost analysis require expertise beyond traditional evaluation and accounting practices. Levin suggests that one should not confuse expertise in accounting with expertise in cost-benefit or cost-effectiveness analysis. He also recommends that the conceptual framework of these studies not be the sole work of the expert. The multiple skills required in cost-effectiveness/benefit studies may be why institutions avoid conducting cost-evaluations.

Sources of Controversy in Cost Analysis

In a National Center for Research in Vocational Education review of cost analysis studies, Hu (1980) concluded that, "Meaningful effectiveness data must be collected and guided by agreed-upon objectives and definitions of output to measure these objectives" (p.20). Hu's review of cost-effectiveness and cost-benefit analysis studies is one of the two recent critical reviews of cost analysis research. Hu's recommendations and cautionary notes are similar to those proposed in other cost evaluation systems (Shipp, 1981; Thompson, 1980; Pershing and Schwandt, 1980; Levin 1980).

The previous record of cost analysis research was viewed by one expert as, "the reader should be cautioned against assuming that all studies using CB (cost-benefit) or CE (cost-effective) approaches have been conducted appropriately and represent models for emulation. Unfortunately, it is the experience of this author that the majority of CB and CE studies carried out in education to date have been seriously flawed and should not be used as standard" (Levin, 1981). Levin, recently established the Center for Cost Effectiveness Evaluation (CCEE)to promote improvement in cost analysis study.

Most models which presently are construed to be cost-effectiveness/benefit analysis fall into "seriously flawed" category. Notable exceptions are those developed by Shipp, Levin, and Thompson. Each of these models, like Kim's, is accountancy

based. Another model by Marson (1977), used in Wisconsin, relies on institutional records as the primary database. This model contains excellent procedural specifications and survey formats, but doesn't develop specific measurable goals and objectives as the Kim model requires. Another strength in the Marson model is the specification of cost centers and distribution of institution costs for direct and indirect costs. A recent book by Thompson (1980) is particularly comprehensive in developing benefit-cost analysis principles and in comparing them to cost-effectiveness concepts. Levin also is publishing a book on cost analysis in evaluation. (Special appreciation is given to Dr. Henry Levin of the Center for Cost Effectiveness Evaluation at Stanford University for permission to use information from the preliminary draft of this book).

A major difficulty in cost-benefit studies is the concept of valuing nonmonetary benefits. Some cost-analysts would prefer to not even consider quanitfying these benefits. There is even the strategy in dealing with these effects termed, "nonquantification". Later a discussion of another technique called "shadow pricing" is discussed. Thompson (1980) reports a controversial procedure valuing nonmonetary effects called "compensating variation". These variations reflect both positive and negative values that must be factored.

Beneficiaries of Cost Analysis

In cost-benefit analysis three separate but related groups can

benefit from cost analysis. The first group that can benefit from vocational-technical program completion is the consumer of the educational program or training. This type of benefit is usually in the form of job mobility, job stability, sustaining employment, increased earning, satisfaction of self by continuing learning, and skill base through training.

The second recipient of benefits of vocational programing cost analysis is the institution. These benefits include factors such as; identifying program strengths, concerns, and weaknesses as perceived by students, and employers of the graduates. These benefits relate to the appropriateness of objectives and goals in planning the educational mission of the program areas, and the efficiency and effectiveness of the the programs. These factors are crucial in operational and strategic planning activities. Cost-benefit analysis adds the dimension, is what is being proposed or implemented worth the cost,or does the cost exceed the potential benefit.

Part of the controversy rests with using concepts such as "rate of return on investment". A newly developed program may take many years to become cost-effective or cost-beneficial. A program may be temporarily costly due to factors beyond the institution's control. Factors such as general economic declines, adverse funding levels, or unexpected competition may be temporary conditions resulting in higher costs. Institutions can benefit from cost-analysis evaluation through providing feedback information about individual programs only if the

information is collected. This institutional data can also serve external audiences who articulate with the institution such as employers, economic development councils, media, and policy makers.

Another benefiting sector of vocational-technical programs that can be demonstrated through cost-benefit analysis is the community which houses the institution. These benefits include income spent in the community from purchasing goods and services from business and individuals in the community, spending of income earned by employees of the institution, and increased opportunity for new and developing businesses because facilities and human resourses are available to provide a trained work-force. The added social benefits of an educated and employment trained citizenery improves the potenitial for quality of life in the community. Many of these benefits are interrelated between the three recipient audiences who benefit from the program offerings. The noneconomic benefits pose measurement problems that must be accounted through explicit assumption development.

Shipp (1981) suggests the selection of benefits expected be relevant, measurable, and directly associated with the outcomes specified. Shipp remarks, "It is seldom defensible to equate a change in the knowledge level of a continuing education participant with a change in the performance of that participant's job" (p.12). Shipp uses "indices of performance" in measuring monetary and nonmonetary quantifiable benefits associated with measuring change in an organization. In

developing the benefit indices, Shipp reinforces preferred use of treatment and control groups (participants and nonparticpants) over before and after procedures with just participants.

Cost Analysis and Decision Making

Presently, there seems to be two primary schools of thought about the appropriate methodology in cost analysis evaluation. One view is, program effectiveness should be the primary element in decision making, particularly when program costs are relatively low. The other view is that the cost factor plays the primary role in decision analysis. Shipp (1981) points out that attaining an educational objective is not "necessarily synonymous with an organizational benefit" (p.12). Consequently, obtaining objectives in cost-benefit analysis doesn't automatically lead to effective decision making in institutional planning. Periodically, an evaluator decides to incorporate both views and applies accounting methods together with effectiveness measures and arrives at decision data. Levin (1981) cautions against using cost analysis in decision making:

> " One of the most confusing aspects of incorporating costs analysis to evaluation and decision making is that a number of different, but related, concepts and terms are often used interchangeable in referring to such approaches. Among these are, cost-effectiveness, cost-benefit analysis, cost-utility, and cost-feasibility. Although each is related and can be considered to be a member in good standing of the cost effectiveness family, each is characterized by important differences which makes it appropriate to specific applicaions" (p9).

The pitfalls of using cost-effectiveness and similar methods is eloquently proposed in an article discussing "rational planning

and cost-analysis in vocational education" by Pershing and Schwandt (1980). The authors warn that expedience of decision making from pressure to "strive for certainty" can lead to premature programming. They reinforce the position that relevant facts must be available and goals prescribed agreed upon in cost analysis evaluation. Hu (1980) offered this state-of-the-art perspective of cost analysis:

> "Although cost-effectiveness and cost-benefit analyses provide useful information for policy makers, there are several weaknesses of a straight forward economic benefit-cost analysis. First, some cost and benefit indicators are only partial or proxy measures for total costs and benefits. Certain benefits and costs are difficult to quantify or to evaluate in monetary terms. Second, in estimating the benefits and the costs of a program based on actual data, economists often make several strong assumptions in order to use these data for the purpose of evaluation...Therefore, one should not accept these cost-effectiveness and cost-benefit analyses without question" (p. 2).

Hu also mentions that the strength of cost analysis is not in their numerical numbers, but in the rationale they provide for decision making.

The utilization of results of costs analysis studies must be kept in proper perspective. Levin recommended that cost analysis evaluation studies be used as information that may help planners in reaching decisions. Levin suggests even the best analyses must be combined with other types of information in order to make good decisions:

> "The fundemental problem is that as helpful as evaluative studies can be in providing information on alternatives they must necessarily be incomplete.

> First, even though they are very well conceived and implemented, both measures of costs and of benefits, effects, and utilities are really estimates of those dimensions. This does not mean that they are misleading, but they are always subject to some error" (p.126).

Levin also notes that the more similar the objectives being measured (such as within a program over time) the more useful the information. Comparative program decision making based on cost-benefit analysis data may be less than desirable because such studies are estimates of benefits and effects.

Identifying Costs.

One important consideration which underlies each model of cost analysis is the procedure followed in identifying costs. The greater majority of studies use an accounting cost procedure. This procedure compares costs with expenditure, annualizted costs and even extracts present values. The latest contrasting model adds the dimension of the cost of resource sacrifice. These "social" costs assume that once a resource is used for one purpose then it cannot be used for another purpose; i.e., use of part of a building. The key factor in the resource cost model is that many costs are not readily apparent in the accountancy model. In the Shipp and the Levin model, "all" conceivable costs are included. If a donated facility is being used for a program, then equivalent rent costs must be included in the program cost. Levin coins this the "valuing of ingredients". Some of the cost "ingredients" proposed by Levin are social in nature and can be

valued using techniques such as shadow pricing. Some of the valuation techniques are; market prices, shadow price, joint costs, and annualized costs, and present value. Levin defines shadow price as any indicator of the value of the ingredients sacrificed alternatives. The concepts of annualized costs and present value of future costs are recognized practices in many models. One unique feature about Levin's model is the practice of "distributing" costs to the appropriate groups involved in the program. The costs distributed to the different constituencies provides an information base about who may support or oppose a particular program. For example, the costs distributed to developing a new program may require raising tuition. If enrollments drop in the insititution as a result of implementing the new program (higher tuition cost for students), the net result may be detrimental to the institution. The comprehensive costs identification and allocation principles proposed by Shipp (1981) are particularly useful in classifying and understanding input factors.

Marson (1977)identifies costs by categories of; private economic costs, private noneconomic costs, social economic costs, social noneconomic costs. The private costs are incurred by the student and the social costs, the school. In the Marston cost benefit model some of the costs require acceptable estimates for noneconomic elements such as job satisfaction, improved attitudes toward employment, community involvement. Some of the private costs are; (economic) tuition, fees, travel supplies, interest on loans, (noneconomic) less leisure time, and missing

family activities.

The economic theory that Pershing (1978) used defines two types of measurable costs; first, explicit costs, "money payments made to outsiders who provide the labor, materials, power, transportation and so forth that are required to produce and market a product", and second, implicit costs, "costs assigned to resources which are owned by the producer and used in production" (p.37). One important theoretical assumption not presentd in the Kim model is that the alternative use of resources must be included in cost analysis. These "opportunity costs" represent the sacrifice of alternative opportunities to use the resources. (Shipp 1981; Levin, 1981; Pershing, 1978; Hu, 1980). For example, when facilities or personnel are being used by program A, they cannot be used by program B. These "ingredients" need to be cost analyzed to arrive at the monetary value of the sacrifice. Equivalent costs for volunteer services and donated space and materials also must be necessary ingredients in identifying "all" costs.

Use of Cost Anaysis in Comparing

Levin (1981) comments that comparing benefits or costs are more reliable and meaningful when a program is compared with itself. This assumption, shared by Kim (1977b), is the validity of cost/benefit analysis is higher in studies of the same program over time, and the validity reduces when comparing programs or institutions. Both researchers caution against comparing

different programs in the same institution or similar programs in different insitiutions. The primary reason for this caution is the objectives of unlike programs, or similar programs in different insitiutions, may differ considerably.

Comparative cost-benefit analysis of the same program over time can also pose problems but are more appropriate. Many programs change objectives from year to year creating a different program emphasis. If a program was concerned about student recruitment and concentrated resources on that objective for one year, and the next shifted to program quality, comparing the two years may provide questionable cost-benefit data. The specifying of objectives becomes crucial both from a substantive and a financial view point. Program evaluation has been an established practice and the research on evaluating effectiveness is exhaustive. Also, the cost-analysis of programs is becomming more econometric with techniques previously mentioned such as annualizing costs, and discounting future costs. While the accounting techniques have provided more stringent controls, they are not a panacea. The art of evaluation becomes much more complex when the costs of programs are melded together with effectiveness or benefits.

Conclusion and Recommendations

The first conclusion is directed at the use of the Kim model in cost analyses evaluation at Ivy Tech. The model does provide techniques that can assist in planning and implementing such

evaluations provided that expertise is available to assist in the processes. Techniques of cost valuing and distribution proposed by Shipp (1981), and Levin (1981) are more appropriate than those proposed by Kim. If the Kim model is used, the Practicum Manual guide seems more useful than Kim's other manuals. The single cost-benefit/cost-effectiveness integrated model originally published should not be used because it contains conceptual flaws. A cautionary note is also in order about the cookbook approach to conducting cost-effectiveness or cost-benefit studies. This approach projects an image of simplicity in implementing these evaluations when, in fact they are extremely complex and time consuming. The resources of the institution must be committed when conducting a cost analysis evaluation.

The MOVE Grant enabled Ivy Tech, Region 8, to develop the systematic information base on program effectiveness, student characteristics, program costs, and employer perceptions of the institution. These data, together with other information compiled, can be the feedback impetus for formulating necessary measurable goals and objectives for program operation and institutional planning. It is recommended that Ivy Tech identifies a few programs to be the focus of a cost-effectiveness evaluation using combined techniques of Levin and Shipp. It is also suggested that proposed new programs be "worked-up" according to Levins cost-feasibility model if only "cost" are being considered, or, cost-utility methods when added subjective judgements are present. The supporting worksheets to estimate and distribute costs together with the decision analysis forms in

Levins model go beyond Kim's and should be used in the initial pilot cost analysis evaluation at Ivy Tech.

It is also recommeded that cost-effectiveness evaluation be conducted to test methods for increasing student achievement. The measurement techniques are now available to evaluate both costs and effects of different instructional practices or delivery systems. Programs should be encouraged to improve through experimentation with instruction without a "fear" of retribution resulting from cost-effectiveness evaluation. Cost analysis evaluation should be used for informational purposes in developing the mission of Ivy Tech in Region 8. Consequently, the longitudinal collection of data should be a priority for continued organization development.

The cost-effectiveness evaluation should also be applied to non-instructional activities in the organization such as support services and administrative activities where measurement of both costs and effectiveness is cricial. A particular need is to assess program costs of facilities and equipment which are presently donated or leased below market price. These unaccounted liabilities are important elements in institutional planning and in identifying future needs. Assessment of facilities "actual market value" costs should be developed.

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INDIANA VOCATIONAL TECHNICAL COLLEGE: REGION 8

ORGANIZATIONAL DEVELOPMENT RESEARCH

STUDY OF GRADUATES

Section A: Study of Graduate Characteristics

Section B: Perceptions of Program Effectiveness

A Multiplex Opportunities for
Vocational Education Report
Ronald B. Britton Ed.D
Indiana University
December 1982

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Section A: Study of Graduate Characteristics

Introduction

Indiana Vocational Technical College annually surveys graduates to compile information about how they rate the training and education they receive. Other biographic data is compiled to identify information such as employment status of graduates. The Multiplex Opportunities for Vocational Education (MOVE) grant provided Indiana Vocational Technical College the opportunity to assess graduates' perception of program strengths, concerns, and weakness while conducting the annual graduate follow-up study.

Methodology

The scope of the graduate follow-up study was extended to include graduate data for eight complete quarters or two full years. A graduate survey form was sent to 1046 graduates with 439 usable forms being returned for a 42% return rate. The 1046 graduates represented the entire population of students who graduated between Summer quarter 1981 and Spring quarter 1982. Three separate mailings were sent to graduates to maximize the opportunity for graduates to participate in the study. Student name and address labels were generated from the enrollment records, and graduate program codes obtained from the graduate data profiles. The survey instruments contained a stamped return addressed envelope. The survey data was keyed into data files

on computer tape. The computer file of graduates was processed using the Statistical Analysis System (SAS). Frequencies in percentages for each question was tabulated, resulting in 68 different variables. A composite of question frequencies and percentages are presented in the appendix on the questionnaire form. The narrative report varies from the sequence of questions which appears in the questionnaire. The general biographic data is presented before providing results of employment and postgraduate data.

Analysis of Data

The eight quarters of Ivy Tech graduates who returned the questionnaire were representative of program diversity at Ivy Tech. Most of the findings are reported as percentages of returned responses. Many of the cumulative percentages do not equal 100% because of answer omissions. As expected, the larger number of returned questionnaires were from the larger program areas such as Nursing.

Most of the respondents were female (53.3%), to (43.2%) male. Also, most of the graduates indicated they were married (48.9%), another 36.4% stated they were single, and 11.1% reported they were divorced. The racial composition of the graduates who responded was as follows:

White/Caucasian.....75.8%

Black/Negro.....14.1%

American Indian..... 2.0%

Hispanic..... .2%

Asian..... 2.0%

The greater majority of students reported they were enrolled full-time while they were at Ivy Tech (83.5% full-time to 13.0% part-time). The employment status of the graduates while they were enrolled indicated most students worked full-time in addition to being full-time students. The percentage of students by number of hours employed while enrolled was:

Not employed.....31.8%

1-20 hours per week.....18.4%

20-30 hours per week.....11.3%

30-40 hours per week.....18.9%

more than 40 hours per week....14.8%

The Financial Aid Programs participated in by students during their enrollment represented a wide-range of selection. The different programs utilized and the percentage of students receiving aid was as follows:

CETA..... 8.4%

Basic Educational
Opportunity grant.....24.1%

College Work Study..... 3.4%

GI Bill.....20.0%

Child of Disabled Veteran..... 2.0%

Disabled Veteran..... 1.8%

Supplemental Education

Opportunity Grant..... 1.5%

Guaranteed Student Loan..... 8.6%

Private Scholarship..... 3.1%

State Scholarship..... 4.5%

None.....35.0%

The first question identified the employment status of the graduates. 72.4% responded that they were employed full-time, 9.5% stated they were employed part-time, and 2.2% said they were currently laid-off. Only .2% stated they were in the armed services. The unemployed status was divided into two categories; first, graduates who were not looking for work, and second, those who were looking for work. 2.7% indicated they were unemployed but not looking, while 9.8% stated they were unemployed and looking for work. Also, 3.8% of the graduates were continuing their education. A comparison of employment status for graduates versus nonreturning students indicated that twice as many nonreturnees were unemployed and looking for work. This comparison also revealed that 10% more graduates were employed full-time, while three times as many nonreturnees were laid-off.

Employment Status

Employed full-time.....72.4%

Employed part-time..... 9.5%

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Laid-off..... 2.2%

In Armed services..... .2%

Unemployed, not looking..... 2.7%

Unemployed, looking..... 8.8%

Continuing Education..... 8.8%

Next, graduates were asked if their current or most recent job was related to the training they received at Ivy Tech. 67.4% said "yes" it was related, and 27.1% stated "no" it was not related to their training. The graduates were then asked to indicate their degree of satisfaction with their current or most recent job. 73.8% reported they were "satisfied", while 17% said they were not satisfied. The graduates were asked to indicate the extent to which the skills learned at Ivy Tech helped them in their most recent job. 50.1% said "yes, definitely, 27.5% said "yes, on a limited basis", and 15.4% said "no".

The weekly salary of graduates before deductions was reported as follows:

Under $150..... 9.7%

$151-$200.....17.5%

$201-$300.....36.4%

$302-$400.....14.3%

$400 or more.....13.2%

The salary earned by graduates was higher than the salary of nonreturning students. The percentage of individuals reporting

income "below" $150 per week was twice as high for nonreturnees as it was for graduates.

The question was asked if this salary was an increase from the beginning salary. The responses were 62.8% "yes", and 27.3% "no". The next question attempted to find what the graduate thought their salary might be had they not attended Ivy Tech. It was anticipated the responses could be compared to the previous answers and an inference drawn about the graduates' perception of the salary benefit they derived from attending Ivy Tech. One perceived benefit to attending Ivy Tech was in salary earned. This was demonstrated in the large difference between actual salary earned and the salary graduates thought they would be earning had they not attended Ivy Tech. 70% of graduated reported they thought their earnings would be below $200 per week had they not attended, while only 27% actually earned less than $200 per week. The salaries were grouped according to the above range values and the results were as follows:

Under $150.....41%
$150-$200.....29%
$201-$300.....17%
$301-$400.....11%
$400 or more..... 1%

The graduates were asked if they thought they would be employed had they not attended Ivy Tech. The purpose was to gain insight into the perception of benefit the graduate associated to

attending Ivy Tech. 70.6% of the graduates reported "yes" they thought they would be employed now and 21.1% said "no" they probably would not be employed. More than twice as many graduates reported they thought they would be unemployed if they had not attended Ivy Tech than actually were unemployed and looking for work.

Question 10 asked who assisted the graduate most in obtaining their first job since leaving Ivy Tech. The results were:

Ivy Tech Placement, faculty staff...15.0%
Friends, relatives.....17.3%
Want ads (newspapers,radio).....10.7%
State Employment Agency..... 2.0%
Other.....39.6

The large number of "other" responses indicated that many of the graduates were employed in their present job prior to their graduation. This was verified by the question which identified how soon after leaving Ivy Tech did the graduate begin their first job:

Immediately.....19.8%
Less than five weeks.....14.5%
Five weeks or more.....19.1%
Employed while in school.....33.2%

Most of the graduates reported their jobs did not require

relocation; 79.2% said no relocation required, and 5% indicated relocation required.

The next question identified the number of job offers the graduates received before they accepted their present job. It was anticipated the reponses would help to identify the job resources for Ivy Tech graduates. The large number of graduates who already were employed detracted from reaching an intelligible conclusion. The reported results were as follows:

Number of Job Offers

1.....59.9%
2.....24.2%
3.....10.1%
4..... 2.0%
5..... 2.3%
6 or more..... 1.3%

Graduates were asked to rate the training they received while at Ivy Tech. This question received further elaboration in the section evaluating graduates perceptions of program strengths, concerns, and weakness. The responses to the over-all rating of training was:

Excellent.....23.9%
Above Average.....39.8%
Average.....31.4%
Below Average..... 1.8%

Poor..... .6%

Satisfaction with Ivy Tech was also demonstrated by the large majority of graduates who indicated they would recommend Ivy Tech to a friend compared to those would not recommend Ivy Tech (85.4% to 10 %).

Graduates during this period maintained a very consistent enrollment as reflected by responses to the question, "Did you leave Ivy Tech more than once after attending"? Only 7 % indicated they had left while 91.3% did not leave. This data, together with knowledge that most graduates attended full-time, supports the view that respondents were motivated to achieve their graduation.

Section B: Perceptions of Program Effectiveness

The second purpose of the research was to identify the perceptions that graduates reported about one, the program from which they graduated, and two, a few general service functions provided by the college. The directions to the graduate were to provide their opinion of the program according to three Likert type options. The options and their definitions were; "strength" (satisfactory as is), "concern" (may need improving), and "need" (does need improving).

Twenty-one different variables comprised the program effectiveness section of the study. This report will present the six highest ranked "strengths", "concerns",and "needs" most mentioned. The percentages for each variable by effectiveness ranking appears in the sample questionnaire in the appendix.

Strengths	%
1. Helping me with basic math and reading	81.5%.
2. Grading system	80.4%
3. Contact with teachers	77.8%
4. Helping me as a person	77.1%
5. Cost of attending	76.4%

6. Time required to complete program...75.9%

Concerns	%
1. Availability of new equipment	38.8%
2. Quality of teaching	35.4%
3. Courses available each quarter	34.4%
4. Academic counseling	32.4%
5. Content of courses	31.5%
6. Amount of equipment and supplies	30.8%

Needs	%
1. Availability of jobs	27.4%
2. Availability of new equipment	26.8%
3. Amount of equipment and supplies	19.4%
4. Academic counseling	14.2%
5. Getting financial aid	12.2%
6. Courses available each quarter	11.6%

Items which appear both as "concerns" and "needs" in a rough rank order are; "availability of new equipment, "academic counseling", "courses available each quarter", and "amount of equipment and supplies". Most of the descriptions are self-explanatory except for the two expressed needs of "academic counseling" and "getting financial aid". It is not known if the graduates were reporting a need for more counseling, or better counseling, or more

counselors. The same caution exists for the need of getting financial aid. It is possible that aid is not available, or students cannot establish the need because they are working full-time. The data may demonstrate a need for additional study in the future. Caution should be exercised in interpreting the results of these items because of their ambiguity.

A comarison of the graduate data to the nonreturning student data indicated that the benefits of continued attendence and graduation were higher wages and higher employment rates. The unemployment rate and the number of nonreturnees reported being laid-off was double that of graduates. Further analysis of data comparing these two groups of attenders will be conducted. Deriving conclusions comparing the two groups is limited because of the small return percentage of the nonreturning student survey. However, data from surveying these two groups can serve as information in examining program history and in developing future program goals and objectives.

APPENDIX

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EIGHT QUARTERS- 1981 & 1982

1. What is your current employment status? (check all that apply)

72.4% 318 A. Employed full-time
9.5% 42 B. Employed part-time
2.2% 10 C. Laid-off, How long ___ wks.
.2% 1 D. In Armed services full-time
2.7% 12 E. Unemployed, not looking
8.8% 39 F. Unemployed, looking for work
8.8% 39 G. Continuing Education

2. Name and address of your current or most recent employer.

_____

_____

_____

Date employed: _____

Immediate supervisor's name? _____

3. Is your current or most recent job related to the training you received?

7.4% 296 A. Yes 119 B. No 27.1%

4. How satisfied are you with your current or most recent job?

3.8% 324 A. Satisfied 79 B. Dissatisfied 17%

5. Have the skills you learned at Ivy Tech helped you in your most recent job? (check one)

220 A. Yes, definitely 50.1%
121 B. Yes, on a limited basis 27.5%
68 C. No 15.4%

6. What is your current (or last) salary per week. (before deductions)

3.7% 43 A. Under $150
7.5% 77 B. $151 - $200
4% 160 C. $201 - $300
14.3% 63 D. $301 - $400
13.2% 58 E. $400 or more

7. Is this an increase from your beginning salary?

37% A. Yes 62.8%
120 B. No 27.3%

8. What do you estimate your earnings would be if you had not attended Ivy Tech?

$ _____ week. 41%-$150
29%-$151-200
17%-$201-300
11%-$301-400
1%-$401-

9. Do you think you would be employed now had you not attended Ivy Tech?

310 A. Yes 70.6%
93 B. No 21.1% If yes, in what capacity? _____

10. Who assisted you most in obtaining your first job since leaving Ivy Tech. (check one)

15% 66 A. Ivy Tech (Placement Office, Faculty, Staff)
7.3% 76 B. Friends, relatives
39.6% 174 E. Other (Specify)_____
47 C. Want Ads (Newspaper, radio) 10.7%
9 D. State Employment Agency 2.0%

_____

11. How soon after leaving Ivy Tech did you begin your first job?

19.8% 87 A. Immediately
14.5% 64 B. Less then five weeks
19.1% 84 C. Five weeks or more
33.2% 146 D. Employed while in school

12. My first job: (check one)

348 A. Did not call for relocation
79.2%

22 B. Called for relocation
5.0%

13. How many job offers were received before you accepted your first job? (circle one)

1	2	3	4	5	6	or more
178	72	30	6	7	4	(lower numbers)
59.9%	24.2)	10.1%)	2.0%)	2.3%)	1.3%	

14. During your enrollment at Ivy Tech were you primarily a:

367 A. Full-time student
83.5%

59 B. Part-time student
13.0%

15. During your enrollment at Ivy Tech how many hours were you employed?

31.8% 140 A. I was not employed
18.4% 81 B. 1 - 20 hours per week
11.3% 50 C. 20 - 30 hours per week
18.9% 83 D. 30 - 40 hours per week
14.8% 65 E. More than 40 hours per week

16. Which of the following Financial Aid Programs were you on while a student at Ivy Tech?

8.4% 37 A. CETA
24.1% 106 B. Basic Education Opportunity Grant
3.4% 15 C. College Work Study
20.0% 88 D. GI Bill
2.7% 12 E. Child of Disabled Veteran
1.8% 8 F. Disabled Veteran
1.5% 7 G. Supplemental Education Opportunity Grant
8.6% 38 H. Guaranteed Student Loan
3.1% 14 I. Private Scholarship
4.5% 20 J. State Scholarship/Grant
35.0% 154 K. None

17. Rate the training you received at Ivy Tech. (check one)

23.9% 105 A. Excellent
39.8% 175 B. Above Average
31.4% 138 C. Average
1.8% 8 D. Below Average
.6% 3 E. Poor

18. Would you recommend Ivy Tech to a friend?

375 A. Yes
85.4%

44 B. No
10.0%

19. Did you leave Ivy Tech more than once after attending?

31 A. Yes
7.0%

401 B. No
91.3%

20. Check all that may apply.

43.2% 190 A. Male
53.3% 238 B. Female
48.9% 215 C. Married
36.4% 160 D. Single
11.1% 49 E. Divorced
14.1% 62 F. Black/Negro
75.8% 333 G. White/Caucasian
2.0% 9 H. American/Indian
.2% 1 I. Hispanic
2.0% 9 J. Asian

21. Please check (✓) the column which best describes *each* of the questions as to your opinion of the Ivy Tech program in which you were enrolled.

	STRENGTH (satisfactory as is)	CONCERN (may need improving)	NEED (does need improving)
A. Time required to complete program	331 -75.9%	82 -18.8%	23 -5.2%
B. Time classes are offered	304-69.8%	105 -24.3%	26 -5.9%
C. Quality of Teaching	251 -57.4%	155 -35.4%	31 -7.0%
D. Location of classes	288 -65.7%	108 -24.6%	42 -9.5%
E. Academic Counseling	225 -53.3%	137 -32.4%	60 -14.2%
F. Cost of attending	332 -76.4%	83 -19%	21 -4.8%
G. Size of classes	324 -73.9%	83 -18.9%	31 -7.0%
H. Relevance of courses	302 -70%	106 -24.5%	23 -5.3%
I. Grading system	353 -80.4%	76 -17.3%	10 -2.3%
J. Contact with teachers	341 -77.8%	79 -17.8%	19 -4.3%
K. Prepared me for a job	273 -63.1%	115 -26.6%	44 -10.1%
L. Availability of jobs	180 -42.9%	124 -29.5%	115 -27.4%
M. Getting Financial Aid	248 -64.5%	89 -23.1%	47 -12.2%
N. Content of courses	275 -62.9%	138 -31.5%	24 -5.4%
O. Difficulty of courses	307 -71.0%	107 -24.7%	18 -4.1%
P. Courses available each quarter	234 -53.7%	150 -34.4%	51 -11.7%
Q. Practical experience in classes	268 -61.1%	124 -28.3%	46 -10.5%
R. Helping me as a person	335 -77.1%	78 -17.9%	21 -4.8%
S. Helping me with basic math and reading	328 -81.5%	57 -14.1%	17 -4.2%
T. Amount of equipment and supplies	218 -49.7%	135 -30.8%	85 -19.4%
U. Availability of new equipment	149 -34.2%	169 -38.8%	117 -26.8%

Return the completed questionnaire in the enclosed envelope. Thank you.

N=....21 PROGRAM...Accounting Technology.....CODE..01

Indiana Vocational Technical College

Graduate Characteristics 1981- 1982

1. Current employment status	N	%
a. Employed Full-Time	15	71.4
b. Employed Part-Time	2	9.5
c. Laid-off	1	4.7
d. In Armed Services	0	0.0
e. Unemployed, "not" looking for work	1	4.7
f. Unemployed, looking for work	1	4.7
g Continuing Education	2	9.5
3. Is current job related to training		
a. Yes	12	57.1
b. No	8	38.0
4. How satisfied with current job		
a. Satisfied	14	66.6
b. Dissatisfied	6	28.5
5. Have skills learned helped in job		
a. Yes, definitely	12	57.1
b. Yes, on a limited basis	3	14.2
c. No	5	23.8
6. Current or last salary per week		
a. Below $150	4	19.0
b. $151-$200	5	23.8
c. $201-300	6	28.5
d. $300-$400	2	9.5
e. More than $400	1	4.5

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CODE....01	N	%
7. Increase from beginning salary		
a. Yes	15	71.4
b. No	5	23.8
8. Estimated salary if had not attended		
a. Under $150 per week	3	24.9
b. $151-$200	7	58.1
c. $201-$300	2	16.6
d. $301-$400	1	8.3
e. More than $400	1	8.3
9. Would you be employed if had not attended		
a. Yes	16	76.1
b. No	3	14.2
10 Who assisted you in job placement		
a. Ivy Tech Placement office, faculty	4	19.0
b. Friends, relatives	1	4.7
c. Want ads, (newspaper, radio)	2	9.5
d. State Employment Agency	3	14.2
e. Other	7	33.3
11. How soon did you obtain first job		
a. Immediately	1	4.7
b. Less than 5 weeks	1	4.7
c. Five weeks or more	3	14.2
d. Employed while in school	11	52.3
12. Did first job require relocation		
a. Yes	4	19.0
b. No	17	80.9

CODE.01..	N	%
13. Number of job offers received		
One	8	61.5
Two	1	7.6
Three	2	15.2
Four	1	7.6
Five	0	0
Six or more	1	7.6
14. Enrollment status while in at Ivy Tech		
Full-time student	15	71.4
Part-time student	5	23.8
15. Hours employed during enrollment		
a. Was not employed	7	33.3
b. 1-20 hours per week	2	9.5
c. 20-30 hours per week	4	19.0
d. 30-40 hours per week	5	23.8
e. More than 40 hours per week	3	14.2
16. Which financial aid received		
a. CETA	1	4.7
b. BEOG	9	42.8
c. College Work Study	1	4.7
d. GI Bill	2	9.5
e. Child of Disabled Veteran	1	4.7
f. Disabled Veteran	0	0
g. SEOG	0	0
h. GSL	0	0
i. Private Scholarship	0	0
j. State Scholarship	2	9.5
k. None	8	38.0

CODE..Q1.	N	%
17. Rate training you received at Ivy Tech		
a. Excellent	5	23.8
b. Above average	9	42.8
c. Average	6	28.5
d. Below average	0	0
e. Poor		
18. Recommend Ivy Tech to a friend		
a. Yes	16	76.1
b. No	4	19.0
19. Did you leave Ivy Tech more than once		
a. Yes	1	4.7
b. No	20	95.2
20.a. Male	6	28.5
b. Female	15	71.4
c. Married	11	52.3
d. Single	3	14.2
e. Divorced	6	28.5
f. Black/Negro	3	14.2
g. White/Caucasian	16	76.1
h. American Indian	0	0
i. Hispanic	0	0
j. Asian	1	4.7

N=..59 PROGRAM. Computer Prog. .....CODE.05.

Indiana Vocational Technical College

Graduate Characteristics 1981- 1982

1. Current employment status	N	%
a. Employed Full-Time	37	62.7
b. Employed Part-Time	7	11.8
c. Laid-off	1	1.6
d. In Armed Services	0	0
e. Unemployed, "not" looking for work	1	1.6
f. Unemployed, looking for work	10	18.9
g Continuing Education	6	10.1
3. Is current job related to training		
a. Yes	37	62.7
b. No	16	27.1
4. How satisfied with current job		
a. Satisfied	39	66.1
b. Dissatisfied	13	22.0
5. Have skills learned helped in job		
a. Yes, definitely	27	45.7
b. Yes, on a limited basis	16	27.1
c. No	10	16.9
6. Current or last salary per week		
a. Below $150	9	15.2
b. $151-$200	13	22.0
c. $201-300	14	23.7
d. $300-$400	12	20.3
e. More than $400	4	6.7

CODE. 05.	N	%
7. Increase from beginning salary		
a. Yes	30	50.8
b. No	21	35.5
8. Estimated salary if had not attended		
a. Under $150 per week	4	9.0
b. $151-$200	11	24.2
c. $201-$300	17	37.4
d. $301-$400	8	17.6
e. More than $400	4	8.8
9. Would you be employed if had not attended		
a. Yes	43	72.8
b. No	12	20.3
10 Who assisted you in job placement		
a. Ivy Tech Placement office, faculty	10	16.9
b. Friends, relatives	12	20.3
c. Want ads, (newspaper, radio)	10	16.9
d. State Employment Agency	3	5.0
e. Other	15	25.4
11. How soon did you obtain first job		
a. Immediately	9	15.2
b. Less than 5 weeks	5	8.4
c. Five weeks or more	18	30.5
d. Employed while in school	20	33.8
12. Did first job require relocation		
a. Yes	46	77.9
b. No	4	6.7

CODE...05	N	%
13. Number of job offers received		
One	26	66.6
Two	11	28.2
Three	2	5.1
Four	0	0
Five	0	0
Six or more	0	0
14. Enrollment status while in at Ivy Tech		
Full-time student	48	81.3
Part-time student	11	18.6
15. Hours employed during enrollment		
a. Was not employed	21	35.5
b. 1-20 hours per week	9	15.2
c. 20-30 hours per week	8	13.5
d. 30-40 hours per week	16	27.1
e. More than 40 hours per week	2	3.3
16. Which financial aid received		
a. CETA	6	10.1
b. BEOG	16	27.1
c. College Work Study	6	10.1
d. GI Bill	8	13.5
e. Child of Disabled Veteran	2	3.3
f. Disabled Veteran	1	1.6
g. SEOG	2	3.3
h. GSL	3	5.0
i. Private Scholarship	1	1.6
j. State Scholarship	3	5.0
k. None	24	40.6

CODE.05...	N	%
17. Rate training you received at Ivy Tech		
a. Excellent	15	25.4
b. Above average	24	40.6
c. Average	15	25.4
d. Below average	2	3.3
e. Poor	1	1.6
18. Recommend Ivy Tech to a friend		
a. Yes	46	77.9
b. No	11	18.6
19. Did you leave Ivy Tech more than once		
Yes	2	99.2
No	55	1.6
20.a. Male	21	35.5
b. Female	35	59.3
c. Married	25	42.3
d. Single	1	38.9
e. Divorced	10	16.9
f. Black/Negro	5	8.4
g. White/Caucasian	47	79.6
h. American Indian	1	1.6
i. Hispanic	0	0
j. Asian	3	5.0

N=...20 PROGRAM...Industrial Mgmt.....CODE...09.

Indiana Vocational Technical College

Graduate Characteristics 1981- 1982

1. Current employment status	N	%
a. Employed Full-Time	17	85.0
b. Employed Part-Time	1	5.0
c. Laid-off	1	5.0
d. In Armed Services	0	0
e. Unemployed, "not" looking for work	1	5.0
f. Unemployed, looking for work	0	0
g Continuing Education	6	30.0
3. Is current job related to training		
a. Yes	7	35.0
b. No	12	60.0
4. How satisfied with current job		
a. Satisfied	11	55.0
b. Dissatisfied	7	35.0
5. Have skills learned helped in job		
a. Yes, definitely	5	25.0
b. Yes, on a limited basis	10	50.0
c. No	3	15.0
6. Current or last salary per week		
a. Below $150	1	5.0
b. $151-$200	0	0
c. $201-300	4	20.0
d. $300-$400	5	25.0
e. More than $400	9	45.0

CODE..09	N	%
7. Increase from beginning salary		
a. Yes	18	90.0
b. No	1	5.0
8. Estimated salary if had not attended		
a. Under $150 per week	1	7.6
b. $151-$200	2	15.3
c. $201-$300	3	22.9
d. $301-$400	7	53.2
e. More than $400	0	0
9. Would you be employed if had not attended		
a. Yes	16	80.0
b. No	3	15.0
10 Who assisted you in job placement		
a. Ivy Tech Placement office, faculty	1	5.0
b. Friends, relatives	4	20.0
c. Want ads, (newspaper, radio)	1	5.0
d. State Employment Agency	0	0
e. Other	8	40.0
11. How soon did you obtain first job		
a. Immediately	1	5.0
b. Less than 5 weeks	0	0
c. Five weeks or more	0	0
d. Employed while in school	14	70.0
12. Did first job require relocation		
a. Yes	17	85.0
b. No	0	0

CODE..09.	N	%
13. Number of job offers received		
One	10	76.9
Two	1	7.6
Three	1	7.6
Four	0	0
Five	0	0
Six or more	1	7.6
14. Enrollment status while in at Ivy Tech		
Full-time student	16	80.0
Part-time student	4	20.0
15. Hours employed during enrollment		
a. Was not employed	1	5.0
b. 1-20 hours per week	3	15.0
c. 20-30 hours per week	2	10.0
d. 30-40 hours per week	7	35.0
e. More than 40 hours per week	7	35.0
16. Which financial aid received		
a. CETA	1	5.0
b. BEOG	5	25.0
c. College Work Study	3	15.0
d. GI Bill	12	60.0
e. Child of Disabled Veteran	1	5.0
f. Disabled Veteran	0	0
g. SEOG	0	0
h. GSL	0	0
i. Private Scholarship	0	0
j. State Scholarship	3	15.0
k. None	3	15.0

CODE..09.	N	%
17. Rate training you received at Ivy Tech		
a. Excellent	3	15.0
b. Above average	11	55.0
c. Average	6	30.0
d. Below average	0	0
e. Poor	0	0
18. Recommend Ivy Tech to a friend		
a. Yes	20	100
b. No	0	0
19. Did you leave Ivy Tech more than once		
Yes	3	15.0
No	17	85.0
20.a. Male	14	70.0
b. Female	6	30.0
c. Married	14	70.0
d. Single	5	25.0
e. Divorced	1	5.0
f. Black/Negro	5	25.0
g. White/Caucasian	15	75.0
h. American Indian	0	0
i. Hispanic	0	0
j. Asian	0	0

N=.108. PROGRAM...Practical Nursing.....CODE..44

Indiana Vocational Technical College

Graduate Characteristics 1981- 1982

1. Current employment status	N	%
a. Employed Full-Time	88	81.4
b. Employed Part-Time	11	10.1
c. Laid-off	0	0
d. In Armed Services	0	0
e. Unemployed, "not" looking for work	4	3.7
f. Unemployed, looking for work	1	.9
g Continuing Education	6	5.5
3. Is current job related to training		
a. Yes	102	94.4
b. No	3	2.7
4. How satisfied with current job		
a. Satisfied	102	94.4
b. Dissatisfied	1	.9
5. Have skills learned helped in job		
a. Yes, definitely	80	74.0
b. Yes, on a limited basis	22	20.3
c. No	1	.9
6. Current or last salary per week		
a. Below $150	4	3.7
b. $151-$200	16	14.8
c. $201-300	67	62.0
d. $300-$400	12	11.1
e. More than $400	6	5.5

CODE 44.	N	%
7. Increase from beginning salary		
a. Yes	74	68.5
b. No	28	25.9
8. Estimated salary if had not attended		
a. Under $150 per week	43	60.2
b. $151-$200	17	23.8
c. $201-$300	9	12.6
d. $301-$400	0	0
e. More than $400	0	0
9. Would you be employed if had not attended		
a. Yes	81	75
b. No	24	22.2
10 Who assisted you in job placement		
a. Ivy Tech Placement office, faculty	14	12.9
b. Friends, relatives	14	12.9
c. Want ads, (newspaper, radio)	8	7.4
d. State Employment Agency	0	0
e. Other	66	61.1
11. How soon did you obtain first job		
a. Immediately	44	40.7
b. Less than 5 weeks	35	32.4
c. Five weeks or more	17	15.7
d. Employed while in school	8	7.4
12. Did first job require relocation		
a. Yes	96	88.8
b. No	5	4.6

CODE.44..	N	%
13. Number of job offers received		
One	44	50.5
Two	26	29.8
Three	13	14.9
Four	1	1.1
Five	2	2.2
Six or more	1	1.1
14. Enrollment status while in at Ivy Tech		
Full-time student	101	93.5
Part-time student	2	1.8
15. Hours employed during enrollment		
a. Was not employed	54	50.0
b. 1-20 hours per week	25	23.1
c. 20-30 hours per week	12	11.1
d. 30-40 hours per week	9	8.3
e. More than 40 hours per week	1	.9
16. Which financial aid received		
a. CETA	12	11.1
b. BEOG	27	25
c. College Work Study	0	0
d. GI Bill	2	1.8
e. Child of Disabled Veteran	0	0
f. Disabled Veteran	0	0
g. SEOG	1	.9
h. GSL	14	12.9
i. Private Scholarship	7	6.4
j. State Scholarship	2	1.8
k. None	51	47.2

CODE..44..	N	%
17. Rate training you received at Ivy Tech		
a. Excellent	29	26.8
b. Above average	41	37.9
c. Average	35	32.4
d. Below average	1	.9
e. Poor	0	0
18. Recommend Ivy Tech to a friend		
a. Yes	96	88.8
b. No	8	7.4
19. Did you leave Ivy Tech more than once		
Yes	5	4.6
No	100	92.5
20.a. Male	4	3.7
b. Female	104	96.3
c. Married	58	53.7
d. Single	1	.9
e. Divorced	12	11.1
f. Black/Negro	11	10.1
g. White/Caucasian	84	77.7
h. American Indian	4	3.7
i. Hispanic	1	.9
j. Asian	1	.9

N=..32 PROGRAM..Electronics..Tech.....CODE..65.

Indiana Vocational Technical College

Graduate Characteristics 1981- 1982

1. Current employment status	N	%
a. Employed Full-Time	28	87.5
b. Employed Part-Time	0	0
c. Laid-off	0	0
d. In Armed Services	0	0
e. Unemployed, "not" looking for work	1	3.1
f. Unemployed, looking for work	2	6.2
g Continuing Education	3	9.3
3. Is current job related to training		
a. Yes	22	68.7
b. No	9	28.1
4. How satisfied with current job		
a. Satisfied	24	75.0
b. Dissatisfied	7	21.8
5. Have skills learned helped in job		
a. Yes, definitely	12	37.5
b. Yes, on a limited basis	12	37.5
c. No	7	21.8
6. Current or last salary per week		
a. Below $150	1	3.1
b. $151-$200	1	3.1
c. $201-300	10	31.2
d. $300-$400	8	25.0
e. More than $400	11	34.3

CODE. 65.	N	%
7. Increase from beginning salary		
a. Yes	23	71.8
b. No	8	25.0
8. Estimated salary if had not attended		
a. Under $150 per week	1	5.2
b. $151-$200	3	15.6
c. $201-$300	10	52.0
d. $301-$400	5	26.0
e. More than $400	0	0
9. Would you be employed if had not attended		
a. Yes	23	71.8
b. No	8	25.0
10 Who assisted you in job placement		
a. Ivy Tech Placement office, faculty	6	18.7
b. Friends, relatives	5	15.6
c. Want ads, (newspaper, radio)	2	6.2
d. State Employment Agency	2	6.2
e. Other	12	37.5
11. How soon did you obtain first job		
a. Immediately	4	12.5
b. Less than 5 weeks	4	12.5
c. Five weeks or more	7	21.8
d. Employed while in school	14	43.7
12. Did first job require relocation		
a. Yes	25	78.1
b. No	3	9.3

CODE.65..	N	%
13. Number of job offers received		
One	12	54.5
Two	5	22.7
Three	3	13.6
Four	0	0
Five	2	9.0
Six or more	0	0
14. Enrollment status while in at Ivy Tech		
Full-time student	23	71.8
Part-time student	8	25.0
15. Hours employed during enrollment		
a. Was not employed	5	15.6
b. 1-20 hours per week	5	15.6
c. 20-30 hours per week	5	15.6
d. 30-40 hours per week	7	21.8
e. More than 40 hours per week	9	28.1
16. Which financial aid received		
a. CETA	1	3.1
b. BEOG	3	9.3
c. College Work Study	1	3.1
d. GI Bill	14	43.7
e. Child of Disabled Veteran	2	6.2
f. Disabled Veteran	0	0
g. SEOG	0	0
h. GSL	3	9.3
i. Private Scholarship	3	9.3
j. State Scholarship	1	3.1
k. None	8	25.0

CODE..65..	N	%
17. Rate training you received at Ivy Tech		
a. Excellent	3	9.3
b. Above average	11	34.3
c. Average	17	53.1
d. Below average	1	3.1
e. Poor	0	0
18. Recommend Ivy Tech to a friend		
a. Yes	28	87.5
b. No	4	12.5
19. Did you leave Ivy Tech more than once		
Yes	4	12.5
No	28	87.5
20.a. Male	29	90.6
b. Female	3	9.3
c. Married	20	62.5
d. Single	10	31.2
e. Divorced	2	6.2
f. Black/Negro	4	12.5
g. White/Caucasian	25	78.1
h. American Indian	2	6.2
i. Hispanic	0	0
j. Asian	1	3.1

N=..19.. PROGRAM...Htg. Air Cond. Ref.....CODE..71

Indiana Vocational Technical College

Graduate Characteristics 1981- 1982

1. Current employment status	N	%
a. Employed Full-Time	15	78.9
b. Employed Part-Time	0	0
c. Laid-off	1	5.2
d. In Armed Services	0	0
e. Unemployed, "not" looking for work	0	0
f. Unemployed, looking for work	2	10.5
g Continuing Education	1	5.2
3. Is current job related to training		
a. Yes	9	47.3
b. No	9	47.3
4. How satisfied with current job		
a. Satisfied	12	63.1
b. Dissatisfied	5	26.3
5. Have skills learned helped in job		
a. Yes, definitely	6	31.5
b. Yes, on a limited basis	8	42.1
c. No	4	21.0
6. Current or last salary per week		
a. Below $150	1	5.2
b. $151-$200	4	21.0
c. $201-300	3	15.7
d. $300-$400	4	21.0
e. More than $400	5	26.3

CODE.71.	N	%
7. Increase from beginning salary		
a. Yes	11	57.8
b. No	6	31.5
8. Estimated salary if had not attended		
a. Under $150 per week	5	33.0
b. $151-$200	3	19.9
c. $201-$300	3	19.9
d. $301-$400	3	19.9
e. More than $400	1	6.6
9. Would you be employed if had not attended		
a. Yes	13	68.
b. No	5	26.3
10 Who assisted you in job placement		
a. Ivy Tech Placement office, faculty	3	15.7
b. Friends, relatives	5	26.3
c. Want ads, (newspaper, radio)	3	15.7
d. State Employment Agency	0	0
e. Other	6	31.5
11. How soon did you obtain first job		
a. Immediately	4	21.0
b. Less than 5 weeks	1	5.2
c. Five weeks or more	4	21.0
d. Employed while in school	8	42.1
12. Did first job require relocation		
a. Yes	16	84.2
b. No	1	5.2

CODE..... 71	N	%
13. Number of job offers received		
One	11	73.3
Two	1	6.6
Three	1	6.6
Four	0	0
Five	1	6.6
Six or more	1	6.6
14. Enrollment status while in at Ivy Tech		
Full-time student	11	57.8
Part-time student	7	36.8
15. Hours employed during enrollment		
a. Was not employed	4	21.0
b. 1-20 hours per week	3	15.7
c. 20-30 hours per week	1	5.2
d. 30-40 hours per week	6	31.5
e. More than 40 hours per week	5	26.3
16. Which financial aid received		
a. CETA	0	0
b. BEOG	1	5.2
c. College Work Study	0	0
d. GI Bill	5	26.3
e. Child of Disabled Veteran	1	5.2
f. Disabled Veteran	2	10.5
g. SEOG	0	0
h. GSL	2	10.5
i. Private Scholarship	0	0
j. State Scholarship	0	0
k. None	8	42.1

CODE..71..	N	%
17. Rate training you received at Ivy Tech		
a. Excellent.....	4	21.0
b. Above average.....	7	36.8
c. Average.....	8	42.1
d. Below average.....	0	0
e. Poor.....	0	0
18. Recommend Ivy Tech to a friend		
a. Yes.....	17	89.4
b. No.....	1	5.2
19. Did you leave Ivy Tech more than once		
Yes.....	0	0
No.....	18	94.7
20.a. Male.....	19	100
b. Female.....	0	0
c. Married.....	11	57.8
d. Single.....	5	26.3
e. Divorced.....	3	15.7
f. Black/Negro.....	1	5.2
g. White/Caucasian.....	16	84.2
h. American Indian.....	0	0
i. Hispanic.....	1	5.2
j. Asian.....	1	5.2

N=..20.. PROGRAM..Welding.....CODE.80..

Indiana Vocational Technical College

Graduate Characteristics 1981- 1982

1. Current employment status	N	%
a. Employed Full-Time	12	60.0
b. Employed Part-Time	2	10.0
c. Laid-off	3	15.0
d. In Armed Services	0	0
e. Unemployed, "not" looking for work	0	0
f. Unemployed, looking for work	6	5.0
g Continuing Education	1	5.0
3. Is current job related to training		
a. Yes	9	45.0
b. No	11	55.0
4. How satisfied with current job		
a. Satisfied	11	55.0
b. Dissatisfied	9	45.0
5. Have skills learned helped in job		
a. Yes, definitely	8	40.0
b. Yes, on a limited basis	5	25.0
c. No	7	35.0
6. Current or last salary per week		
a. Below $150	2	10.0
b. $151-$200	6	30.0
c. $201-300	5	25.0
d. $300-$400	2	10.0
e. More than $400	3	15.0

CODE 80	N	%
7. Increase from beginning salary		
a. Yes	9	45.0
b. No	9	45.0
8. Estimated salary if had not attended		
a. Under $150 per week	2	22.2
b. $151-$200	2	22.2
c. $201-$300	3	33.3
d. $301-$400	1	11.1
e. More than $400	0	0
9. Would you be employed if had not attended		
a. Yes	10	50.0
b. No	8	40.0
10 Who assisted you in job placement		
a. Ivy Tech Placement office, faculty	1	5.0
b. Friends, relatives	7	35.0
c. Want ads, (newspaper, radio)	3	15.0
d. State Employment Agency	0	0
e. Other	7	35.0
11. How soon did you obtain first job		
a. Immediately	3	15.0
b. Less than 5 weeks	4	20.0
c. Five weeks or more	5	25.0
d. Employed while in school	6	30.0
12. Did first job require relocation		
a. Yes	15	75.0
b. No	3	15.0

CODE.80..	N	%
13. Number of job offers received		
One	11	84.6
Two	2	15.3
Three	0	0
Four	0	0
Five	0	0
Six or more	0	0
14. Enrollment status while in at Ivy Tech		
Full-time student	14	70.0
Part-time student	6	30.0
15. Hours employed during enrollment		
a. Was not employed	7	35.0
b. 1-20 hours per week	3	15.0
c. 20-30 hours per week	1	5.0
d. 30-40 hours per week	3	15.0
e. More than 40 hours per week	6	30.0
16. Which financial aid received		
a. CETA	0	0
b. BEOG	6	30.0
c. College Work Study	0	0
d. GI Bill	5	25.0
e. Child of Disabled Veteran	0	0
f. Disabled Veteran	0	0
g. SEOG	0	0
h. GSL	1	5.0
i. Private Scholarship	0	0
j. State Scholarship	0	0
k. None	8	40.0

CODE..80.	N	%
17. Rate training you received at Ivy Tech		
a. Excellent	4	20.0
b. Above average	6	30.0
c. Average	9	45.0
d. Below average	0	0
e. Poor	1	5.0
18. Recommend Ivy Tech to a friend		
a. Yes	18	90.0
b. No	2	10.0
19. Did you leave Ivy Tech more than once		
Yes	2	10.0
No	18	90.0
20.a. Male	20	100
b. Female	0	0
c. Married	8	40.0
d. Single	11	55.0
e. Divorced	1	5.0
f. Black/Negro	2	10.0
g. White/Caucasian	17	85.0
h. American Indian	2	10.0
i. Hispanic	0	0
j. Asian	1	5.0

PROGRAM....Accounting Tech.....Code..01.. N=..21...

Indiana Vocational Technical College

Perception of Program Effectiveness

1981-1982 Graduates

	S	C	N
A. Time required to complete program.....	17	4	0
B. Time classes offered.....	17	4	0
C. Quality of Teaching.....	9	12	0
D. Location of classes.....	15	4	2
E. Academic Counseling.....	10	8	2
F. Cost of attending.....	16	4	1
G. Size of classes.....	17	3	1
H. Relevance of courses.....	17	2	1
I. Grading system.....	20	1	0
J. Contact with teachers.....	19	2	0
K. Prepared me for a job.....	11	8	1
L. Availability of jobs.....	4	5	7
M. Getting Financial Aid.....	9	5	2
N. Content of courses.....	14	6	1
O. Difficulty of courses.....	12	8	1
P. Courses available each quarter.....	12	9	0
Q. Practical experience in classes.....	10	8	2
R. Helping me as a person.....	17	3	1
S. Helping me with basic math and reading.....	1	17	2
T. Amount of equipment and supplies.....	18	1	2
U. Availability of new equipment.....	9	9	2

S= Strength C= Concern N= Need

PROGRAM...Computer Prog.....Code.05. N=..59..

Indiana Vocational Technical College

Perception of Program Effectiveness

1991-1992 Graduates

	S	C	N
A. Time required to complete program.....	51	5	3
B. Time classes offered.....	42	13	4
C. Quality of Teaching.....	31	26	2
D. Location of classes.....	43	13	3
E. Academic Counseling.....	30	15	10
F. Cost of attending.....	47	10	2
G. Size of classes.....	40	15	4
H. Relevance of courses.....	40	16	2
I. Grading system.....	45	12	2
J. Contact with teachers.....	37	15	6
K. Prepared me for a job.....	38	8	12
L. Availability of jobs.....	19	15	24
M. Getting Financial Aid.....	32	12	6
N. Content of courses.....	39	20	0
O. Difficulty of courses.....	42	15	2
P. Courses available each quarter.....	27	27	5
Q. Practical experience in classes.....	37	16	6
R. Helping me as a person.....	42	12	4
S. Helping me with basic math and reading.....	44	6	1
T. Amount of equipment and supplies.....	34	15	9
U. Availability of new equipment.....	37	12	8

S= Strength C= Concern N= Need

PROGRAM..Industrial Mgmt.....Code 09.. N=..20..

Indiana Vocational Technical College

Perception of Program Effectiveness

1981-1982 Graduates

	S	C	N
A. Time required to complete program.....	17	2	1
B. Time classes offered.....	13	5	2
C. Quality of Teaching.....	13	6	1
D. Location of classes.....	15	5	0
E. Academic Counseling.....	11	7	2
F. Cost of attending.....	17	2	1
G. Size of classes.....	15	4	1
H. Relevance of courses.....	12	8	0
I. Grading system.....	16	3	1
J. Contact with teachers.....	17	2	1
K. Prepared me for a job.....	12	5	3
L. Availability of jobs.....	4	9	7
M. Getting Financial Aid.....	16	1	3
N. Content of courses.....	10	10	0
O. Difficulty of courses.....	12	7	1
P. Courses available each quarter.....	5	11	3
Q. Practical experience in classes.....	12	6	2
R. Helping me as a person.....	17	2	1
S. Helping me with basic math and reading.....	1	17	2
T. Amount of equipment and supplies.....	12	6	2
U. Availability of new equipment.....	10	6	4

S= Strength C= Concern N= Need

PROGRAM Medical Asst. Code 37. N= 15

Indiana Vocational Technical College

Perception of Program Effectiveness

1981-1982 Graduates

	S	C	N
A. Time required to complete program	15	0	0
B. Time classes offered	12	2	1
C. Quality of Teaching	8	4	3
D. Location of classes	9	3	2
E. Academic Counseling	12	3	0
F. Cost of attending	13	1	1
G. Size of classes	13	2	0
H. Relevance of courses	10	4	1
I. Grading system	13	2	0
J. Contact with teachers	13	2	0
K. Prepared me for a job	9	6	0
L. Availability of jobs	3	6	5
M. Getting Financial Aid	8	3	1
N. Content of courses	1	10	4
O. Difficulty of courses	2	9	4
P. Courses available each quarter	10	4	1
Q. Practical experience in classes	10	4	1
R. Helping me as a person	13	2	0
S. Helping me with basic math and reading	3	11	1
T. Amount of equipment and supplies	9	5	1
U. Availability of new equipment	6	6	3

S= Strength C= Concern N= Need

PROGRAM. Practical Nursing .....Code. 44. N=. 108.

Indiana Vocational Technical College

Perception of Program Effectiveness

1981-1982 Graduates

	S	C	N
A. Time required to complete program.....	61	34	12
B. Time classes offered.....	75	24	8
C. Quality of Teaching.....	61	40	6
D. Location of classes.....	55	22	21
E. Academic Counseling.....	46	34	24
F. Cost of attending.....	81	18	9
G. Size of classes.....	76	23	9
H. Relevance of courses.....	81	21	5
I. Grading system.....	87	18	3
J. Contact with teachers.....	78	26	4
K. Prepared me for a job.....	80	24	4
L. Availability of jobs.....	81	18	6
M. Getting Financial Aid.....	47	23	17
N. Content of courses.....	70	35	3
O. Difficulty of courses.....	87	18	2
P. Courses available each quarter.....	75	25	8
Q. Practical experience in classes.....	71	25	12
R. Helping me as a person.....	83	22	2
S. Helping me with basic math and reading.....	74	18	8
T. Amount of equipment and supplies.....	59	34	15
U. Availability of new equipment.....	35	45	27

S= Strength C= Concern N= Need

PROGRAM. Electronics Tech. .....Code. 65. N=. 32.

Indiana Vocational Technical College

Perception of Program Effectiveness

1981-1982 Graduates

	S	C	N
A. Time required to complete program.....	24	6	1
B. Time classes offered.....	1	20	10
C. Quality of Teaching.....	11	16	4
D. Location of classes.....	26	4	2
E. Academic Counseling.....	19	8	4
F. Cost of attending.....	25	6	1
G. Size of classes.....	25	4	3
H. Relevance of courses.....	17	12	3
I. Grading system.....	24	8	0
J. Contact with teachers.....	25	5	2
K. Prepared me for a job.....	1	15	10
L. Availability of jobs.....	10	10	10
M. Getting Financial Aid.....	23	4	3
N. Content of courses.....	12	13	7
O. Difficulty of courses.....	20	8	4
P. Courses available each quarter.....	12	15	4
Q. Practical experience in classes.....	12	13	7
R. Helping me as a person.....	21	5	5
S. Helping me with basic math and reading.....	25	5	1
T. Amount of equipment and supplies.....	9	13	10
U. Availability of new equipment	8	12	12

S= Strength C= Concern N= Need

PROGRAM..Htg. Air Cond. Ref.....Code.71.. N=..19..

Indiana Vocational Technical College

Perception of Program Effectiveness

1981-1982 Graduates

	S	C	N
A. Time required to complete program.....	13	6	0
B. Time classes offered.....	9	7	3
C. Quality of Teaching.....	10	7	2
D. Location of classes.....	11	7	1
E. Academic Counseling.....	6	6	6
F. Cost of attending.....	1	12	6
G. Size of classes.....	11	6	2
H. Relevance of courses.....	12	5	1
I. Grading system.....	14	4	1
J. Contact with teachers.....	14	5	0
K. Prepared me for a job.....	9	8	2
L. Availability of jobs.....	7	6	5
M. Getting Financial Aid.....	12	6	1
N. Content of courses.....	9	8	2
O. Difficulty of courses.....	9	8	1
P. Courses available each quarter.....	5	8	5
Q. Practical experience in classes.....	7	8	4
R. Helping me as a person.....	13	5	1
S. Helping me with basic math and reading.....	1	14	1
T. Amount of equipment and supplies.....	7	4	8
U. Availability of new equipment.....	3	4	12

S= Strength C= Concern N= Need

PROGRAM...Indust. Maint.....Code 73.. N=..15.

Indiana Vocational Technical College

Perception of Program Effectiveness

1981-1982 Graduates

	S	C	N
A. Time required to complete program.....	13	1	1
B. Time classes offered.....	6	7	2
C. Quality of Teaching.....	9	5	1
D. Location of classes.....	10	4	1
E. Academic Counseling.....	8	4	2
F. Cost of attending.....	11	4	0
G. Size of classes.....	12	3	0
H. Relevance of courses.....	8	6	1
I. Grading system.....	10	5	0
J. Contact with teachers.....	11	4	0
K. Prepared me for a job.....	5	6	3
L. Availability of jobs.....	2	7	4
M. Getting Financial Aid.....	8	4	2
N. Content of courses.....	8	5	2
O. Difficulty of courses.....	9	5	1
P. Courses available each quarter.....	4	4	6
Q. Practical experience in classes.....	8	4	3
R. Helping me as a person.....	12	3	0
S. Helping me with basic math and reading.....	1	12	2
T. Amount of equipment and supplies.....	1	5	9
U. Availability of new equipment.....	7	8	0

S= Strength C= Concern N= Need

PROGRAM..Machine Tool.....Code.77.. N=.15..

Indiana Vocational Technical College

Perception of Program Effectiveness

1981-1982 Graduates

	S	C	N
A. Time required to complete program.....	15	0	0
B. Time classes offered.....	9	5	1
C. Quality of Teaching.....	10	5	0
D. Location of classes.....	11	4	0
E. Academic Counseling.....	7	8	0
F. Cost of attending.....	11	2	2
G. Size of classes.....	10	4	1
H. Relevance of courses.....	10	5	0
I. Grading system.....	12	2	1
J. Contact with teachers.....	11	4	0
K. Prepared me for a job.....	9	6	0
L. Availability of jobs.....	2	7	6
M. Getting Financial Aid.....	9	3	3
N. Content of courses.....	9	6	0
O. Difficulty of courses.....	11	4	0
P. Courses available each quarter.....	7	6	2
Q. Practical experience in classes.....	12	2	1
R. Helping me as a person.....	11	4	0
S. Helping me with basic math and reading.....	13	2	0
T. Amount of equipment and supplies.....	6	6	3
U. Availability of new equipment.....	1	9	5

S= Strength C= Concern N= Need

PROGRAM...Welding.....Code 80.. N=..20..

Indiana Vocational Technical College

Perception of Program Effectiveness

1981-1982 Graduates

	S	C	N
A. Time required to complete program.....	4	4	2
B. Time classes offered.....	10	6	3
C. Quality of Teaching.....	12	4	4
D. Location of classes.....	13	5	2
E. Academic Counseling.....	7	7	4
F. Cost of attending.....	13	5	1
G. Size of classes.....	12	4	3
H. Relevance of courses.....	10	6	3
I. Grading system.....	15	4	1
J. Contact with teachers.....	15	1	4
K. Prepared me for a job.....	9	7	4
L. Availability of jobs.....	3	6	11
M. Getting Financial Aid.....	12	2	4
N. Content of courses.....	12	6	2
O. Difficulty of courses.....	14	4	2
P. Courses available each quarter.....	6	9	5
Q. Practical experience in classes.....	11	8	1
R. Helping me as a person.....	14	4	2
S. Helping me with basic math and reading.....	15	2	3
T. Amount of equipment and supplies.....	8	4	8
U. Availability of new equipment.....	5	6	9

S= Strength C= Concern N= Need

Study of Graduates

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INDIANA VOCATIONAL TECHNICAL COLLEGE: REGION 8

ORGANIZATIONAL DEVELOPMENT RESEARCH

NONRETURNING STUDENTS

Section A: Study of Nonreturning Students Characteristics

Section B: Perceptions of Program Effectiveness

A Multiplex Opportunities for
Vocational Education Report
Ronald B. Britton Ed.D
Indiana University

December 1982

Nonreturning Student Study

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INDIANA VOCATIONAL TECHNICAL COLLEGE

Nonreturning Student Survey

Section A: Nonreturning Student Characteristics

Methodology

The population of nonreturning students consisted of 7,182 students who were enrolled at Indiana Vocational Technical College (Ivy Tech) but did not register for a class the following quarter. Students who graduated from Ivy Tech were not included in this survey. Students not returning to Ivy Tech as registered students between Summer quarter 1981 through Fall quarter 1982 comprise the population of the study. A sample size of 1,038 students was selected by drawing a stratified sample proportionate in size to the number of nonreturning students in the separate program areas. The stratification by program was preferred over a random sample to insure a proportionate sample of each program area. Apriori knowledge of the size of each of the strata enabled the sample selection procedure. The stratification procedured followed can be found in Stopher and Meyburg, "Survey Sampling in Multivariate Analysis for Social Scientists and Engineers".

The stratified sample of 1,038 nonreturning students was sent a questionnaire requesting information on certain biographical

data, possible reasons for not returning, and perceptions of program quality. Each questionnaire contained a stamped, self-addressed envelope to expedite returning of the questionnaire. A total of three mailings to the six quarters of nonreturning students yielded 148 usable responses for a 14.2% response rate. It is speculated that the low percentage of return could be attributed to the amount of time which had transpired between the period of time the student left Ivy Tech and their responding to the survey. Twenty-seven different program areas were represented by returned questionnaires. The small number of responses in each program area suggests that data analysis by program division is more suitable than by specific program area. A sample questionnaire with data results for each question appears in the appendix.

Data Analysis

Frequency distrubutions and percentages were obtained for 89 separate variables using the Statistical Analysis System (SAS). The first 43 variables were biographical data information ranging from employment status to number of courses the individual completed at Ivy Tech. Findings are frequencies representing the nonreturning student sample as a group. The variable results are listed under question groupings that appeared on the questionnaire.

Question 1: What is your current employment status? 91 individuals (61.4%) responded they were employed full-time; 14

individuals (9.4%) were employed part-time; 9 individuals (6%) responded they were laid off; 2 responded they were in the armed services full-time (1.3%); 11 nonreturnees stated were unemployed, not looking for work; 26 individuals (17.5%) stated they were unemployed, looking for work; and 13 individuals (8.7%) responded they were continuing their education.

Employed full-time.....61.4%
Employed part-time..... 9.4%
Laid-off..... 6.0%
In Armed service..... 1.3%
Unemployed not looking for work. 7.4%
Unemployed looking for work.....17.5%
Continuing education..... 8.7%

Question 2. What is the name and address of the current or most recent employer together with the date employed and supervisor's name and title?

Question 3. Is your current or most recent job related to the training you received? 60 individuals (40.5%) responded "yes", their current job was related to the training they received, and 78 individuals (52.7%) responded "no", their current or most recent job was not related to the training they received.

Question 4. How satisfied are you with your current or most recent job? 101 individuals (68.2%) indicated they were satisfied with their current or most recent job, while 33

individuals (22.2%) indicated being dissatisfied.

Question 5. Have the skills you learned at Ivy Tech helped you at your most recent or present job? 33 individuals (22.2%) responded "yes", definitely the skills learned helped, 44 individuals (29.7%) stated that "yes, skills helped on a limited basis", and 59 individuals (39.8%) responded "no", the skills learned did not help on the current or most recent job.

Question 6. What is your current (or last) weekly salary (before deductions)? 29 individuals (19.5%) indicated their current salary was below $150, 23 individuals (15.5%) stated their earnings between $151-$200, 39 individuals (26.3%) indicated a weekly salary between $201-$300, 22 individuals (14.8%) responded their salary was between $301-$400 per week, while 16 individuals (10.8%) stated they earned $400 or more per week.

Under $150.....19.5%
$151-$200.....15.5%
$201-$300.....26.3%
$301-$400.....14.8%
$400 or more.....10.8%

Question 7. Is this an increase from beginning salary? 96 individuals (64.8%) indicated that yes, this was an increase from their beginning salary, while 37 individuals (25%) stated this was not an increase from their beginning salary.

Question 8. "Who assisted you most in obtaining your first job after graduation? 4 individuals (2.7%) stated that Ivy Tech Placement Office, faculty, and/or staff assisted in obtaining the first job; 22 individials (28.3%) stated friends or relatives assisted them most in obtaining their first job; 18 individuals (12.1%) responded want ads in the newspaper, radio, T.V., or magazine assisted them most, while 7 individuals (4.7%) stated an employment agency assisted them most, and 49 individuals (33%) stated other individuals or groups assisted them most in obtaining their first job.

Ivy Tech Placement, faculty, staff.... 2.7%
Friends, relatives.....28.3%
Want ads, newspaper, radio,TV.....12.1%
State Employment Agency..... 4.7%
Other.....33.1%

Question 9. How soon after graduation did you begin work on they first job? 32 individuals (21.6%) stated the began work immediately; 9 people (6%) stated they began work on their first job in less than 5 weeks after "graduation"; 28 individuals (18.9%) stated 5 weeks or more: and 40 individuals stated they were employed while in school.

Questions 8 and 9 contained the word "graduation" as a reference time for the former student. The reference instead should have stated "after leaving Ivy Tech". The word "graduation" may have been perceived to be high school graduation by the respondents.

The next ten variables were concerned with the following biographical data and yielded these results:

a. Male.....40.5%
b. Female.....54.0%
c. Married.....43.2%
d. Single.....36.4%
e. Divorced.....16.2%
g. White/Caucasian..69.5%
h. Black/Negro.....19.5%
i. Asian..... 2.0%

Question 11. How many months since you left Ivy Tech? 36 persons stated they left between one and six months (24%), 44 stated they left between six to twelve months (29.7%), and 45 individuals (30.4%) left more then one year previously.

Question 12. How many quarters did you attend Ivy Tech? 53 persons (35.8%) stated they had attended Ivy Tech only one quarter, 29-nine stated they attended for two quarters (19.5%), 11 persons (7.4%) attended for three quarters, 11 others stated they attended for four quarters, 7 attended for five quarters; 9 persons attended six quarters, 4 persons attended seven quarters, 7 individuals stated eight or more quarters.

Question 13 identified the financial aid programs the nonreturning students participated in while attending Ivy Tech.

The responses were as follows:

Type of Aid	
CETA	2.7%
BEOG	9.4%
College Work Study	2.0%
G I Bill	7.4%
Disabled Veteran	1.3%
SEOG	1.3%
Guaranteed Student Loan	2.0%
Private Scholarship	1.3%
None	68.9%

Question 14. Were you primarily a full-time or a part-time student while enrolled at Ivy Tech? 41 students (27.7%) stated they were full-time students, while 95 individuals (64%) stated they were enrolled part-time while attending. When asked if they had returned to Ivy Tech after first leaving, 40 individuals (27%) indicated they had returned, while 89 students (60%) stated they had not returned after leaving.

Next, the nonreturnees were asked the number of hours they were employed while attending Ivy Tech.

Hours Employed per week	Number	%
Not employed	23	15.5

Less than 20 hours.....	10	6.7
20 - 30 hours.....	11	7.4
30 - 40 hours.....	63	42.5
More than 40 hours	3	21.6

Question 17. Did you leave Ivy Tech more than once after attending? 15 individuals (10%) responded "yes" they had left more than once, but 118 individuals (79.7%) stated they had not left more than once.

Question 18. How many courses did you complete at Ivy Tech? 71 nonreturnees (47.9%) stated they had completed one or two courses, 25 persons (16.8%) completed three to five courses, 14 persons or 9.4% stated they completed six to nine courses, 5 individuals (3.3%) finished ten to fifteen courses, 19 persons (12.8%) completed sixteen or more courses. The large number of nonreturnees who only finished one or two courses should be considered a primary limitation to generalizing institutional strength and weakness reported in this research. These students had limited exposure to Ivy Tech and probably are less qualified to report the institutional climate than students who completed many courses or who graduate from Ivy Tech.

Section 3: Perception of Program Effectiveness

Part two of the questionnaire asked the nonreturnee to respond to

different question elements about the program in which they were enrolled. The person was to identify if they perceived the question element to be a strength (satisfactory as is), a concern (may need improving), a need (does need improving). The major program elements which were perceived as "strength" areas by over 70% of individuals were as follows:

Strength

Size of classes.....77.9%
Relevance of courses.....76.6%
Time classes offered.....76.4%
Location of classes.....76.5%
Grading system.....75.9%
Helping me with basic math/reading..75.4%
Time required to complete program...74.1%
Costs of attending.....73.7%

The areas of concern received fewer responses than did the strength catagories. The highest ranking of concerns by percentages are as follows:

Concern

Availability of jobs.....33.9%
Availability of new equipment.....30.7%
Academic counseling.....30.2%
Quality of teaching.....28.3%
Getting financial aid.....28.7%

Prepared me for a job.....27.9%

The elements which were described as "need" areas generally received the least number of responses. In rank by percentage of responses received they were:

Need

Availability of new equipment.....30.7%

Availability of jobs.....28.1%

Getting financial aid.....22.3%

Prepared me for a job.....22.0%

Amount of equipment and supplies....19.3%

Courses available each quarter.....17.2%

Areas which were ranked high both as a "concern" and a "need" were; "availability of new equipment", "availability of jobs", "getting financial aid", and "prepared me for a job".

Reasons for Leaving Ivy Tech

Part three of the nonreturning student survey identified reasons why the individual left Ivy Tech. The following major reasons for leaving in rank order were;

Learned what I came to learn.....29.2%

Not enough money to go to school....28.0%

Conflict beweeen job and studies....22.8%

Program or courses not available....20.0%

Dissatisfaction with program.....15.7%

Illness, personal, or family.....15.3%

Fullfilled my personal goals.....15.0%

These results were similar to findings of a previous study of nonreturning students at Ivy Tech. The major reason for leaving, in the earlier research, was "learned what I came to learn".

Conclusion and Recommendations

The present study provided information on student characteristics, perceptions of program quality, and reasons for leaving Ivy Tech. Although the percentage of nonreturnees completing and returning the questionnaire was less than desired, it is constructive to periodically compileddata about nonreturnees. The elapsed time between the student leaving and being a participant in the survey was a limitation in acquiring a larger return of questionnaires.

It is recommended that students be surveyed within two quarters of their failure to return to Ivy Tech. A further recommended that a comparison be made of biographic characteristics of nonreturnees and graduates of Ivy Tech. Presently enrolled students should be administered the instrument to identify their perceptions of program strengths, concerns, and weakness.

APPENDIX

1. What is your current employment status? (check all that apply)

91 A. Employed full time 61.4%
14 B. Employed part time 9.4%
9 C. Laid off How long? 6 wks.
2 D. In Armed Services full-time 1.3%
11 E. Unemployed, not looking for work 7.4%
26 F. Unemployed, looking for work 17.5%
13 G. Continuing Education 8.7%

2. Name and Address of current or most recent Employer.

Date Employed Immediate Supervisor's Name: Title

3. Is your current or most recent job related to the training you received?

60 A. Yes 40.5% 78 B. No 52.7%

4. How satisfied are you with your current or most recent job?

101 A. Satisfied 68.2% 33 B. Dissatisfied 22.2%

5. Have the skills you learned at Ivy Tech helped you at your most recent or present job? (check one)

33 A. Yes, definitely 22.2% 44 B. Yes, on a limited basis 29.7% 59 C. No 39.8%

6. What is your current (or last) weekly salary? (before deductions)

29 A. Under $150 19.5% 23 B. $151 $200 15.5% 39 C. $201 $300 26.3% 22 D. $301 $400 14.8% 16 E. $400 or more 10.8%

7. Is this an increase from beginning salary?

96 A. Yes 64.8% 37 B. No 25.0%

8. Who assisted you most in obtaining your first job after graduation? (check one)

7% 6 A. Ivy Tech (Placement Office, Faculty and/or Staff)
3% 42 B. Friends, relatives
1% 18 C. Want Ads (Newspaper, Radio, TV, Magazine)
7 D. State Employment Agency 4.7%
49 E. Other (specify) 33.1%

9. How soon after graduation did you begin work on your first job? (check one)

6% 32 A. Immediately 18.9%
0% 9 B. Less than five weeks 27.0%
28 C. Five weeks or more
40 D. Employed while in school

10. Check all that may apply to you

60 A. Male 40.5%
80 B. Female 54%
64 C. Married 43.2%
54 D. Single 36.4%
24 E. Divorced 16.2%
29 F. Black/Negro 19.5%
103 G. White/Caucasian 69.5%
0 H. American Indian
0 I. Hispanic
3 J. Asian 2.0%

11. How many months since you left Ivy Tech?

36 A. One six months 24.3% 44 B. Six twelve months 29.7% 45 C. more than one year 30.4%

12. How many quarters did you attend IvyTech?

53 A. One 35.8%
29 B. Two 19.5%
11 C. Three 7.4%
11 D. Four 7.4%
7 E. Five 4.7%
9 F. Six 6.0%
4 G. Seven 2.7%
7 H. Eight or more 4.7%

13. Which of the following Financial Aid Programs were you on while a student at Ivy Tech?

4 A. CETA 2.7%
14 B. Basic Educational Opportunity Grant 9.4%
3 C. College Work Study 2.0%
11 D. GI Bill 7.4%
0 E. Child of Disabled Veteran
2 F. Disabled Veteran 1.3%
2 G. Supplemental Educational Opportunity Grant 1.3%
3 H. Guaranteed Student Loan 2.0%
2 I. Private Scholarship 1.3%
0 J. State Scholarship or Grant
102 K. None 68.9%

14. While at Ivy Tech were you primarily enrolled as a

41 A. Full-time student 27.7% 95 B. Part-time student 64.1%

15. Did you return to Ivy Tech after first leaving?

40 A. Yes 27% 89 B. No 60.1%

16. During your enrollment at Ivy Tech, how many hours were you employed?

23 A. I was not employed 15.5%
10 B. 1-20 hours per week 6.7%
11 C. 20-30 hours per week 7.4%
63 D. 30-40 hours per week 42.5%
32 E. More than 40 hours per week 21.6%

17. Did you leave Ivy Tech more than once after attending?

15 A. Yes 10.1% 118 B. No 79.7%

18. How many courses did you complete at Ivy Tech?

71 A. 1-2 47.9% 25 B. 3-5 16.8% 14 C. 6-9 9.4% 5 D. 10-15 3.3% 19 E. 16 - + 12.18%

19. Mark a check (✓) in the column which *best* describes your opinion of each question. Your answer should describe the *program* you were enrolled in while at Ivy Tech.

	STRENGTH (satisfactory as is)	CONCERN (may need improving)	NEED (does need improving)
A. Time required to complete program	103-74.1%	25-17.9%	11-7.9%
B. Time classes offered	107-76.4%	25 17.8%	8-5.7%
C. Quality of Teaching	81-57%	41-28.8%	20-14%
D. Location of classes	108-76.5%	26-18.4%	7-4.9%
E. Academic Counseling	67 56.3%	36-30.2%	16-13.4%
F. Cost of attending	104-73.7%	27-19.1%	10-7.0%
G. Size of classes	106-77.9%	21-15.4%	9-6.6%
H. Relevance of courses	102-76.6%	22-16.5%	9-6.7%
I. Grading system	104-75.9%	22-16%	11-8%
J. Contact with teachers	85 6[illegible]%	31-23.1%	18-13.4%
K. Prepared me for a job	59-50%	33-27.9%	26 22%
L. Availability of jobs	39-37.8%	35-33.9%	29-28.1%
M. Getting Financial Aid	46-48.9%	27 28.7%	21-22.3%
N. Content of courses	89-64.4%	38-27.5%	11-7.9%
O. Difficulty of courses	91-68.4%	32-24%	10-7.5%
P. Courses available each quarter	72-59%	29-23.7%	21-17.2%
Q. Practical experience in classes	78-61.4%	34-26.7%	15-11.8%
R. Helping me as a person	81-63.2%	35 27.3%	12-9.3%
S. Helping me with basic math and reading	77-75.4%	18-17.6%	7 6.8%
T. Amount of equipment and supplies	68-52.7%	36-27.9%	25-19.3%
U. Availability of new equipment	44-38.5%	35-30.7%	35-30.7%

20. Listed below are several reasons why a student might leave school. To what extent are these *your* reasons for leaving Ivy Tech? (Check the appropriate response.)

	Major Reason	Moderate Reason	Minor Reason	Not a Reason
A. Low grades	6-4.8%	4-3.2%	8 6.4%	107-85.6%
B. Found courses too difficult	8 6.4%	6 4.8%	8-6.4%	103-82.4%
C. Inadequate study techniques or habits	4-3.2%	10-8.0%	15-12.0%	96-76.8%
D. Needed a temporary break from studies	12-9.5%	9-7.1%	15-11.9%	90-71.4%
E. Programs or courses not available at this school	25-20%	11-8.8%	7-5.6%	82-65.6%
F. Unsure of program and needed to leave school to decide on possible career	16-13.0%	9-7.3%	13-10.5%	85-69.1%
G. Course work not challenging	7-5.6%	3-2.4%	9-7.2%	105-84.6%
H. Learned what I came to learn	38-29.2%	16-12.3%	12-9.2%	64-49.2%
I. Dissatisfaction with program	20-15.7%	10-7.8%	12-9.4%	85-66.9%
J. Conflict between job and studies	29-22.8%	16-12.5%	7-5.5%	75-59%
K. Accepted a job that didn't need more school	12-9.8%	4-3.2%	7-5.7%	99-81.1%
L. Went into military service	9-7.2%	0	0	115-92.7%
M. Couldn't find a job	8-6.5%	2-1.6%	3-2.4%	109-89.3%
N. Not enough money to go to school	35-28%	5-4%	12-9.6%	73-58.4%
O. Applied but could not obtain financial aid	18-14.6%	5-4.0%	6-4.8%	94-76.4%
P. Financial aid was not sufficient	14-11.4%	10-8.1%	3-2.4%	95-77.8%
Q. Child care not available or too costly	8-6.4%	5-4.0%	4-3.2%	103-86.2%
R. This school too expensive	11-8.8%	5-4.0%	12-9.6%	96-77.4%
S. Found study too time-consuming	5-4.0%	8-6.5%	14-11.3%	96-78.0%
T. Home responsibilities were too great	16-12.8%	10-8.0%	23-18.4%	76-60.8%
U. Illness, personal or family	19-15.3%	1-.8%	5-4.0%	99-78.8%
V. Personal problems	17-13.8%	6-4.8%	10-8.1%	90-73.1%
W. Fulfilled my personal goals in schooling	19-15.0%	9-7.1%	10-7.9%	88-69.8%
X. Marital situation changed my education plans	11-8.9%	4-3.2%	5-4.0%	103-83.7%
Y. Moved out of the area	11-9.0%	0	0	110-90.9%

Other, (Please specify.) _____

_____

Return the completed questionnaire in the enclosed envelope. Thank you.

INDIANA VOCATIONAL TECHNICAL COLLEGE: REGION 8

ORGANIZATIONAL DEVELOPMENT RESEARCH

SURVEY OF SUPERVISORS

Section A: Supervisors Evaluation of Graduates

Section B: Supervisors Evaluation of Ivy Tech

A Multiplex Opportunities for

Vocational Education Report

Ronald B. Britton Ed.D

Indiana University

December 1982

Survey of Supervisors

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Survey of Supervisors

Section A: Supervisor Evaluation of Graduate

Introduction

The Multiplex Opportunities for Vocational Education (MOVE) grant provided the opportunity to modify and expand the annual employers' or supervisors' survey of their perceptions of Ivy Tech graduates' performance. The list of employers, immediate supervisors, and employer addresses was obtained from the graduate follow-up survey forms. The results of these findings represent only the views of employers for graduates who returned their survey forms. Not all graduates returned their survey form, or listed an employer or supervisor.

Methodology

A previously designed survey form was modified and expanded, includinng questions to obtain information about Ivy Tech as perceived by the supervisors of Ivy Tech graduates. This modification paralleled the format used in the graduate survey and the nonreturning student survey by asking supervisors for their perceptions of strengths, concerns and needs about IV Tech programs. Space was also provided for the supervisors to relate

general opinions and comments of their choice. A total of 401 supervisor survey forms were sent and 186 usable forms returned for a 46.3% return rate. Two separate mailings were sent to supervisors within a three week time span. In instances where a graduate did not specify a specific supervisor, the survey form was directed to the personnel office for completion or to be passed on to the graduate's immediate supervisor. Many of the returned forms were only partially completed.

One special feature included on the supervisors' survey form was the option, "Do not have enough information to adequately respond". This option was added to identify the extent which employers posseses or lacked information about Ivy Tech programs. A few employers returned the survey forms blank with a statement that it was not their policy to provide information about individual employees to individuals outside of their organization. Some forms were returned because the graduate listed a wrong address for the employer.

Analysis of Data

Question number one asked the employer if the graduate was still in their employ. 82.7% responded "yes" while 11.2% indicated "no" the graduate was not in their employ. Of the 21 supervisors who stated "no" to the previous question, 14 said the employee's termination was voluntary, and 8 supervisors reported the termination was not voluntary.

The length of employment by the Ivy Tech graduates was as follows:

Less than 6 months.....18.2%
6 months - 1 year.....71.5%
1 year-1/2.....16.6%
1 1/2 years or more.....30.1%

Question 5 asked, "How would you describe the job skills of this employee?"

Excellent.....22.0%
Good.....49.4%
Average.....21.5%
Poor..... 2.1%

A follow-up question was asked concerning the work habits of the graduate as viewed by the supervisor:

Excellent.....30.2%
Good.....40.3%
Average.....21.5%
Poor 2.6%

Seventy-three percent of the supervisors indicated that the present salary of the graduate employee was an increase from their starting salary, while 17.7% reported that the salary was not an increase. This result may correspond with the 18.8% of

graduates who had been employed less than 6 months with the present employer.

Section B: Supervisor Evaluation of Ivy Tech

Identifying the supervisors' perception about the performance of Ivy Tech was obtained in two formats of questions; first, direct questions were asked, followed by a comprehensive checklist to evaluate the "strengths", "concerns", and "needs" of Ivy Tech. The supervisors were asked to "use your professional knowledge and experience with Ivy Tech graduates as a base for your evaluation". If they did not have professional experience or knowledge to reach an opinion, they were given the option to indicate "no opinion".

Supervisors were asked first, "Do you feel Ivy Tech is successful in training its students for employment?" Eighty-two percent responded "yes", Ivy Tech is successful, while 4.3% said, "no". Another question directed at Ivy Tech as an institution was, "How do you rate the reputation of Ivy Tech?" The following responses were given:

Excellent.....10.2%
Good.....59.6%
Average.....17.2%
Poor..... 1.0%

A related question followed to identify further the "image" of Ivy Tech by employing supervisors. "Would you recommend employing more graduates of Ivy Tech should your firm need similar employees?" . The results were, 84.4% stated "yes" they would recommend Ivy Tech graduates employment, while only 2.6% said "no".

The final section of the survey provided the supervisors an opportunity to check responses to a broad range of statements about Ivy Tech. Supervisors were asked to identify if the statement category was a "strength" (satisfactory as is), "concern" (may need improving), or a "need" (does need improving). The primary response to these statements was that the supervisors did not have professional knowledge or experience to reach an opinion. The option of no opinion was the predominant response in 21 of the 23 question statements. Those statements receiving the highest percentage of "no opinion" were:

Funding of programs.....76.1%
Cost effectiveness of programs.....67.9%
Adequacy of equipment.....64.7%
Developing programs for future technologies...64.1%
Amount of equipment and supplies.....63.5%
Programs for upgrading and retraining.....60.7%

The "strength" areas viewed by the supervisors received the next most frequent checked choice. The rankings were as follows:

Transferability of skills learned on the job.....49.3%

Preparation of graduates for the future.....42.9%

Meeting short-term training needs.....42.7%

Programs related to needs of business & industry..40.9%

Instructor skills.....38.5%

Location of facilities.....37.6%

The "concerns" and "needs" categories did not receive very many responses from the supervisors. The low percentage of choices for the highest ranked statements for "concern" was;

Preparation of graduates for the future..... 26.9%

Public relations & information to the public.. 20.3%

Instructor skills..... 18.6%.

Transferability of skills learned to the job...18.5

Programs for upgrading and retraining.....17.7%

Communication between Ivy Tech
and business and industry.....17.3%

"No statement" received more than 7.4% of the supervisor's checks in the "need" category. The response percentages appear in appendix on the sample survey form.

Conclusion

The general conclusion from the data indicated that supervisors of employed graduates lack information about Ivy Tech. The information they did possess was related primarily to their

direct contact with the graduates, which they viewed with a positive perspective. The high percentage given to the response of recommending employment of future graduates from Ivy Tech also reflects the positive. Further analysis by program needs to be conducted to identify if supervisor perceptions of graduates, strengths, concerns, and needs vary or are similar in the different program areas at Ivy Tech.

APPENDIX

INDIANA VOCATIONAL
TECHNICAL COLLEGE

March 17, 1982

Dear Supervisor:

As an employer of Ivy Tech graduates, you are in a position to help guide the development of Ivy Tech in Indianapolis.

The College, as part of its self-study research on graduates, is attempting to assess its strengths, concerns and weaknesses. We need to identify if our graduates are performing on-the-job at your level of expectation.

Please complete the questionnaire and mail it in the enclosed envelope. It is brief. Your answers are very important to our study and will be held in strict confidence.

Thank you very much for your invaluable assistance.

Sincerely,

Meredith L. Carter

Meredith L. Carter, Ed. D.
Vice President/Dean

MLC/dmo

Enclosure

1. Is the above named employee still in your employ?

32.7% 154 A. Yes 21 B No 11.2 %

*If you checked A above, skip to No. 4.

2. If not, was the employee's termination voluntary?

7.5% 14 A. Yes 8 B. No. 4.3 %

3. What was the principle reason for this employee's termination?

4. Approximately how long has this person been employed by you?

18.8% 35 A. Less than 6 months

71.5% 53 B. 6 months - 1 year

16.6% 31 C. 1 year - 1½ years

30.1% 56 D. 1½ years or more

5. How would you describe the job skills of this employee?

22.0% 41 A. Excellent

49.4% 92 B. Good

21.5% 40 C. Average

2.1% 4 D. Poor

6. How would you describe this employee's work habits?

30.1% 56 A. Excellent

40.3% 75 B. Good

21.5% 40 C. Average

2.6% 5 D. Poor

7. Is this employee's current salary an increase over his/her starting salary?

73.6% 137 A. Yes 33 B. No 17.7%

8. Do you feel Ivy Tech is successful in training its students for employment?

82.7% 154 A. Yes 8 B. No 4.3%

9. How do you rate the reputation of Ivy Tech?

10.2% 19 A. Excellent

59.6% 111 B. Good

32 C. Average 17.2%

2 D. Poor 1.07%

10. Would you recommend employing more graduates of Ivy Tech should your firm need similar employee's?

84.4% 157 A. Yes 3 B. No 1.6%

11. How would you recommend that Ivy Tech programs be improved?
(Please give us your comments and ideas. Use reverse side if necessary.)

12. Listed below is a series of general criteria that will be used to evaluate the strengths and weaknesses of Ivy Tech in Indianapolis. Please participate in this evaluation process by checking (✓) the appropriate column which best expresses your opinion about how well Ivy Tech is meeting these criteria. Use your professional knowledge and experience with Ivy Tech graduates as a basis for your evaluation. If you have no professional experience or knowledge to reach an opinion then just place a "O" instead of a check. Thank you.

CRITERIA	"0"	STRENGTH (satisfactory as is)	CONCERN (may need improving)	NEED (does need improving)
A. Preparation of graduates for future	41 25.1	111-42.9%	70-26.9%	44-4.9%
B. Programs related to needs of business and industry	65-40.3%	66-40.9%	22-13.6%	8-4.9%
C. Instructor skills	66-40.9%	62-38.5%	157 18.0%	4-2.4%
D. Communication between Ivy Tech and business and industry	73-45.3%	48-29.8%	28-17.3%	12-7.4%
E. Amount of equipment & supplies	101-63.5%	33-20.7%	18-11.3%	7-4.4%
F. Transferability of skills learned to the job		80-49.3%	30-18.5%	6-3.7%
G. Funding of programs	118-76.1%	22-14.1%	13-8.3%	2-1.2%
H. Location of facilities	81-50%	61-37.6%	13-8.0%	7-4.3%
I. Adequacy of facilities	95-59.7%	44-27.6%	17 10.7%	3-1.8%
J. Adequacy of equipment	103-64.7%	30-18.8%	20-12.5%	6-3.7%
K. Program objectives established	80-49.6%	58-36%	20-12%	3-1%
L. Program is marketed	89-55.?%	52-32.2%	16-9.9%	4-2.4%
M. Public relations & information to the public	71-43.8%	51-31.4%	33-20.3%	7-4.3%
N. Evaluation of programs	85 54.1%	50-31.8%	13-8.2%	9-5.7%
O. Identifying human resource needs of business and industry	93-57.7%	41-25.4%	22-13.6%	5-3.1%
P. Developing programs for future technologies	102-64.1%	30-18.8%	21-13.2%	6-3.7%
Q. Meeting short-term training needs	70-44.0%	68-42.7%	17-10.6%	4-2.5%
R. Programs for upgrading and retraining		25-15.8%	28-17.7%	9-5.6%
S. Programs for job entry	96-60.7% 82-50.6%	55 33.9%	19-11.7%	6-3.7%
T. Teaching methods	71-44.3%	58-36.2%	25-15.6%	6-3.7%
U. Cost effectiveness of programs	106-67.9%	37-23.7%	10-6.4%	3-1.9%
V. Skill development in reading, writing, and math		46-29.2%	24-15.2%	12-7.6%
W. Helping students personally	75-47.7% 78-49.6%	49-31.2%	24-15.2%	6-3.8%
X. Other:				
Y. Other:				

Return the completed questionnaire in the enclosed envelope. Thank you.